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Diseases of SPECIAL OCCUPATIONS.

No. III.

DISEASES OF COLLIERS IN SOUTH LANCASHIRE.

By WILLIAM I. COX, Esq., M.R.C.S., etc., Corresponding Member of the Epidemiological Society.

[*Continued from page 426.*]

IN the present paper, I shall treat only of the prevalent *diseases* of colliers, and not of the disastrous results of any of the *accidents* occurring in coal mines.

II. DISEASES OF COLLIERS.

Class *a*. *Pulmonary Diseases*. *Asthma*, or, more properly speaking, those organic lesions of the lungs and bronchial tubes of which difficulty and shortness of breathing is the necessary concomitant and most prominent symptom, is so common among colliers as to be by some popular writers designated the "scourge of the mine". It is almost always associated with chronic bronchitis, and very frequently with the "black spit"—the characteristic sign of that singular condition of the pulmonary tissue found chiefly* among colliers, and of which I shall immediately speak at large. This asthmatic condition leads ultimately, in the great run of cases, to diseased heart, and its train of miseries.

The *Black Spit* is principally, if not entirely, confined to colliers. The morbid condition of the breathing apparatus, of which the excretion known by the above cognomen is the chief sign during life, would, I believe, be proved to exist far more generally than is now supposed, were the absurd but time-honoured prejudice against autopsies removed, which now prevails among the population in coal districts. In the very few necropsies which I have been enabled to make or witness during my stay in Lancashire, I found on two occasions the whole tissue of the lungs presenting the appearance of being steeped in ink; a perfectly black liquid oozing out, on the substance of the lung being incised in any direction; and the ramifications of the bronchial tubes being also filled with the same unnatural matter. This remarkable pathological phenomenon, first noticed by Pearson, was described by the gifted pen of Laennec in 1806, and afterwards by Dr. William Thomson. It has been called variously, "spurious" or "liquid melanosis", "anthracosis", and "carbonaceous infiltration". I consider "black lung" to be as good a title as the above more learned ones. I am aware that many observers consider this peculiar appearance to be merely the result either of foregone inflammation, or of a permanently embarrassed circulation through the capillary blood-vessels of the lung. On the adoption of either of the above views, the black liquid matter would consist of altered blood and pigment. And such authorities base their opinions principally on two positions; viz.—

1. That a certain amount of induration is often noticed in connexion with the presence of this inky fluid; and,

2. That the lungs of animals which have been kept for a long period of time shut up in a vitiated atmosphere (*i. e.*, containing an abnormal percentage of carbonic acid gas, or an admixture of carbide of hydrogen with a deficient supply of oxygen), are often found, on examination after death, loaded with black deposit, and presenting many of the appearances usually seen after chronic inflammation.

But I am inclined to question the soundness of the inferences drawn, by the observers above alluded to, from these premises. For, first, I have seen the "black lung" in all its intensity, when there has been *no* co-existent hardness; and, secondly, the inky fluid does *not* consist merely of altered blood, as is the case with regard to the lungs of the air-poisoned animals. In fact, I am quite satisfied that the black fluid, or semi-fluid matter found in the lungs of colliers, consists, in principal part, of a foreign body introduced from without, which has found its way through the chink of the glottis, and has accumulated in the air-passages—of coal-dust, in short; although I am willing to admit that the discoloration of the tissue is sometimes in part attributable to congestion or inflammatory action. But then this latter is the *result* of the presence of the foreign body, not the *cause* which has produced the morbid appearance. The results of two *post mortem* examinations which I made fully justify me in drawing such a conclusion. The subjects of these were a man, aged 47, a coal-cutter, and a female, aged 31, who worked at the brow of the pit, "picking and filling," an occupation nearly as much exposed to the cause of this diseased condition as that of those actually at work in the shafts. The disease which proved fatal in the former case, was extensive valvular malady of the heart, with long continued asthma; in the latter case, pulmonary consumption. In each case the black treacly fluid, obtained by cutting into various portions of the lungs (more especially the posterior and inferior portions of the lower lobes), and by slitting up the bronchial tubes, was evaporated to dryness; and the residuum, being broken up and subjected to a red heat in a porcelain tube-retort, behaved precisely as coal under similar circumstances, *i. e.* it evolved a smoke-like gaseous product, which, on being slightly condensed, deposited hydrosulphide of ammonium and coal-tar, and being thus purified, burnt in all respects like the well known compound of the two carbides of hydrogen used in our houses and shops. I cannot, however, claim for this interesting experiment the merit of originality. It but confirms the results already obtained by a previous observer. Dr. Gregory, some years since, tested the black matter from the lung of one of his patients (a collier) with similar confirmation of the hypothesis of a *carbonaceous* deposit. Dr. Hall has alluded to this in his admirable paper on the Sheffield Grinders' Disease in a recent number of the BRITISH MEDICAL JOURNAL. Moreover, the sputa of my two patients (as well as various specimens from other patients labouring under chest symptoms) showed, when subjected to the action of a tolerable lens, the presence of coal in a state of minute subdivision, entangled in masses of grumous-looking mucus.

Tubercular Consumption, and its too well-known career, is very frequently met with among colliers. The local irritation of the tissue of the lung and of the lining membrane of the air-cells and passages, produced by the constant inhalation of coal-dust already spoken of, must contribute very much towards the development of phthisis; by exciting into deadly activity the dormant seeds of tubercular disease, by favouring local congestion around the air-cells, and by the perpetual inducement of bronchial spasm and its perilous results in the effort made to get rid of the offending matter. But whether, as Dr. Watson has suggested in his lectures, the black matter produces disastrous ultimate effects *only* on those, who, by heritage or otherwise, are already unsound in the lungs or prone to decline, may perhaps be properly regarded as an unsettled question. But I think it highly probable that Dr. Watson in this respect is correct in his surmise. For I have stethoscopically examined the chest of many colliers who had had the "black spit" occasionally for years, but who presented no evidence whatever of pectoral mischief. It must be clear, however, that when the deposit has proceeded to any considerable extent, it must occasion a high and serious degree of irritation of the delicate fabric of the breathing apparatus, and hasten the development of disease.

Bronchitis, both acute and chronic, is very prevalent. The chronic form of the malady, often complicated or associated with enlargement of the air-cells of the lung and dilatation of the right cavities of the heart, is, on the whole, the most frequent chest affection.

* I say "chiefly", because I do not certainly know that the lungs of charcoal-burners and sweeps are not sometimes in the same state.

Class *b. Diseases of the Pleura.* Acute and chronic *pleurisy*, with its general results when neglected, effusion of serum or pus into the pleural sac, are of frequent occurrence. The people employed at the "brow" as it is termed, *i. e.* in the open air adjacent to the mouth of the pit, suffer more often and severely from this class of affections than the pit-men. This is easy of explanation. These *employés* are almost equally liable with the colliers to the inhalation of coal-dust and mephitic vapours from the pit-fires; and are, moreover, much more exposed to the vicissitudes of weather.

Class *c. Heart-Disease.* Maladies of the heart, in their various forms and pathological phases, are also very common; and are, I believe, increasing in frequency and severity among colliers. Pericarditis and endocarditis are frequently seen associated with attacks of rheumatic fever. Changes and disorganised conditions of the *valves of the heart* naturally follow, as the deplorable result of repeated attacks of these dangerous maladies. Among the most common diseased conditions found after death, I may mention enlargement (especially of the right ventricle), and thickening of the free borders of the semilunar, aortic, and pulmonary valves (most probably from what have been termed by writers, vegetations, or granulations).

Class *d. Rheumatism* (fibrous and synovial, but most frequently the former variety) is, next to asthma, the commonest of all the diseases of colliers. The *fibrous* form of the malady leads to the structural changes of the heart, described in the last section, and, ultimately, to death by exhaustion or difficulty of breathing: the *synovial* form, to permanently stiff and contracted joints. *Muscular* rheumatism also, in its various phases, especially lumbago, is very frequent.

[*To be continued.*]

Illustrations of HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

KING'S COLLEGE HOSPITAL.

I. LITHOTOMY AND EXCISION OF THE ENLARGED THIRD LOBE OF THE PROSTATE: DEATH: DISEASED KIDNEYS.

Under the care of W. Fergusson, Esq.

[*From Notes by* C. Heath, Esq., *House-Surgeon.*]

John R., aged 65, a robust countryman, was admitted April 4th, with the usual symptoms of stone. The operation for lithotomy was performed on April 11th, by Mr. Fergusson. Two stones were found in the bladder, which was reached with difficulty, in consequence of great enlargement of the prostate. The middle lobe of this gland was seized by the forceps, and excised with a blunt pointed bistoury. Very little hæmorrhage took place. The patient passed a very comfortable night.

April 13th. Orchitis came on. He was anxious; thirsty, with dry tongue, rapid weak pulse, etc. The wound looked well. Large quantities of stimulants were given; but he got weaker, the memory began to fail, and he refused his nourishment. The quantity of brandy was increased to 18 ounces on the 20th, and, as he still continued to sink (without any fresh symptoms), to 24 ounces on the 29th. He died on April 30th, of exhaustion.

On *post mortem* examination, the peritoneum was found healthy. The left kidney was soft and much congested; in its substance was a small deposit of lymph, of the size of a pea. Both ureters were much dilated. The bladder was much thickened and inflamed. A small portion only of the middle lobe of the prostate was left projecting into the cavity of the bladder.

Remarks. This case attracted much attention at the time of the operation, as being the first known attempt to effect the permanent cure of enlarged prostate by means of an operation. The progress of the case, though unsatisfactory as far as the recovery of the patient was concerned, was quite sufficiently favourable to show the propriety of another attempt in a similar case. The patient, it will be observed, survived the operation nearly three weeks. The *post mortem* examination showed extensive disease of the kidneys, which would have almost certainly induced a fatal result after the ordinary operation of lithotomy in a man of his age. On the other hand, there were no signs of peritoneal or of subperitoneal inflammation, nor of any diseased condition which could be ascribed to the operation on the prostate. This novel and bold operation will doubtless be followed by others; in which case, our readers may rely on our keeping them informed of the results.

II. TWO CASES OF PNEUMONIA.

Under the care of G. Johnson, M.D.

[*From Notes by* A. Meadows, Esq., *House-Physician.*]

Dr. Johnson delivered a clinical lecture the other day on two cases of pneumonia recently under his charge, which presented some interesting points in physical diagnosis. We shall give short notes of these cases, and endeavour to bring out the points of importance in their progress.

Case I. A man was admitted on May 15th as an out-patient, on account of fistula *in ano*. The usual operation was performed on that day. Two or three days afterwards, he again presented himself, labouring under pneumonia of the right lung. The physical signs were dulness on percussion behind, extending from the spine of the scapula downwards; and also in front, in a lateral direction obliquely downwards, from midway between the axilla and diaphragm. There was scarcely any vesicular murmur to be heard on auscultation. He was spitting an apricot-coloured juice. Some large crepitation was to be heard, but no bronchial breathing. Puerile respiration was heard in the other lung. After some days, the respiratory murmur was found to be returning in the upper part of the lung; while the fulness in front had extended up to the mamma; so that the middle lobe appeared to be engorged, if not really pneumonic. Above this spot, a pleuritic rub was to be heard. Dr. Johnson remarked on the absence of bronchial breathing in this case, and on the presence of the friction-sound in the pleura. This is rarely heard over a lung already hepatised, probably on account of the limited expansion of the latter.

In the after progress of the case, it was found that the pulse rose in rapidity to 114, while the breathing remained stationary. As this increase in the rapidity of the pulse seemed due to debility, he was treated freely with stimulants, chloric ether, and ammonia, with half an ounce of brandy every two hours. The pulse continued, however, to get weaker and more rapid, so that it become necessary to increase the dose of brandy to half an ounce every hour. He then began to improve, and is now convalescent.

Case II. A painter was admitted on May 22nd. He had been suffering for some days with pain in the right side and dyspnœa. On his admission, very marked dulness was found over the whole of the lower lobe on that side. The vocal vibration, however, was diminished instead of increased. This, which is a remarkable exception to what usually takes place in pneumonia, was observed in the former case also; but not to so great an extent as in the present, in which the vibration of the voice could indeed hardly be felt. Another exception to the usual signs of pneumonia was, that there was no expectoration whatever, as far as could be ascertained. It is indeed possible that some fluid might have been discharged from the lungs, and have passed down the pharynx. These negative signs, however (the absence of vocal vibration and of expectoration), were compensated by the presence of positive evidences of pneumonia; viz., hot and dry skin, and dulness, as in the former case, taking exactly the line which marks the extent of the lower lobe of the lung. This line of dulness is, as a rule, well marked in pneumonia, while in pleurisy there is, of course, no such line; unless (which is very rare) there be adhesions along the edge of this lobe. There was also in this case bronchial breathing, which is another diagnostic sign; as, in pleurisy, the effusion prevents any bronchial breathing from being heard. Dr. Johnson also called attention to the relative frequency of the respiration and pulse, as another help in distinguishing pneumonia from pleurisy. In the former, as a rule, the respiration is much quicker, relatively to the pulse, than in the latter. In this case, the respiration was at first as frequent as 60 in a minute, while the pulse stood at 100. As the inflammation receded, however, the breathing fell to 22, while the pulse dropped to 80.

This case was, in the first instance, treated with salines and liquor ammoniæ acetatis; but, as the breathing became more rapid, it was judged advisable to give a quarter of a grain of tartar emetic every four hours. The breathing soon fell in a remarkable manner, and the case has since progressed favourably.

ST. BARTHOLOMEW'S HOSPITAL.

URINARY FISTULA FROM RIDING, SUCCESSFULLY TREATED BY THE GALVANIC CAUTERY.

Under the care of E. STANLEY, Esq.

[*From Notes by* E. BARKER, Esq., *House-Surgeon.*]

WE published in the number of this JOURNAL for May 30, the account of a case of urinary fistula produced by riding on horseback, and apparently not preceded or accompanied by any narrowing of the canal of the urethra, in which a plastic operation was performed and succeeded almost perfectly—the success being completed by the application of the actual cautery. The subjoined case presents many analogous features to this, but here success was obtained by more simple treatment, probably in consequence of the smaller extent of the loss of substance. As an instance both of a rare affection and of the success of a plan of treatment, which, perhaps, is less used here than it deserves, the case is worthy of notice.

J. F., aged twenty-three, stated that four years ago, while riding a spirited horse, he was suddenly jerked forward to the pommel of the saddle, alighting on the perineum. This caused him considerable pain at the time. Six months afterwards an abscess formed, which burst and discharged pus; and a little urine also passed through the opening. From that time up to six months ago he had not sought any medical assistance; he then presented himself at the hospital, and was admitted into Darker's ward, under Mr. Stanley. An elastic catheter was passed into the bladder, where it was retained for three weeks, in the hope that the abscess might close when the irritation caused by the passage of the urine had been removed. This having failed, the acetum cantharidis was injected into the sinus every other morning; it was perseveringly persisted in, but no beneficial result followed. Two months ago, after the administration of chloroform, a catheter was introduced into the bladder, and platinum wire, coiled on a thin piece of tobacco-pipe, was passed into the whole length of the sinus, as was ascertained by its touching the catheter. The galvanic current was then applied, and the sinus freely cauterised. The catheter was kept in the bladder for nearly three weeks; the wound had thoroughly healed, and no urine has since passed through it. He was discharged cured on June 3rd.

UNIVERSITY COLLEGE HOSPITAL.

THE OSTEOTRITE.

MR. MARSHALL has favoured us with the sight of an instrument recently invented by him for the removal of carious bone from cavities. It is made on the principle of the "millhead" instrument used by the dentists, which in fact it resembles exactly on a large scale, except that the spiral cutting edges (which, however, are not very sharp) radiate from two points on the sides of the vertex of the somewhat conical head. Between these two apices are two or three other spirals which are continued across the head. The advantages of this instrument are, that it can be introduced into a cavity either with slight (or, in favourable cases, with no) dilatation of the original wound, and that the difference of sensation between the softened and healthy bone enables the operator to know when all the diseased bone has been removed. Besides this, the instrument is quite firm, and not liable to the risks attending the use of the gouge, chisel, etc. Thus it is impossible that loose splinters should be left, which must afterwards exfoliate, or that the instrument should slip and wound any parts in the neighbourhood. Mr. Marshall has given to this instrument the name of osteotrite. It is manufactured by Coxeter.

ROYAL FREE HOSPITAL.

ENCEPHALOID DISEASE OF THE RIGHT KIDNEY: OBSOLESCENCE (CURE?) ARRESTED BY INCIDENTAL DEATH FROM HÆMORRHAGE.

Under the care of WILLIAM BRINTON, M.D., Physician to the Hospital.

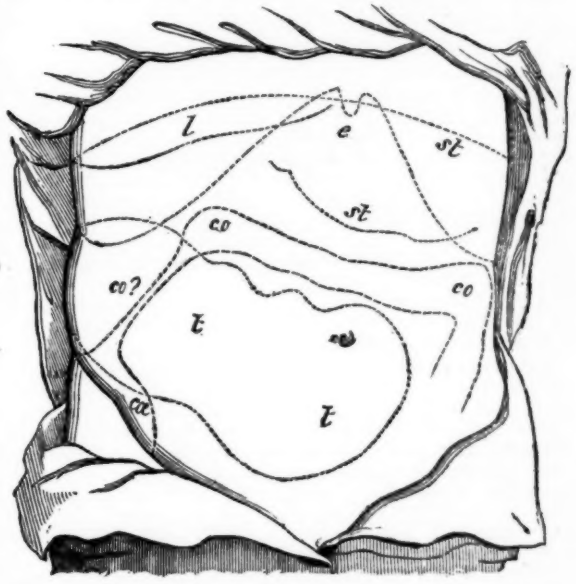
THE interesting character of this case may best be illustrated by the paradoxical statement—that it affords an example of a disease which, usually rapid in its growth, had existed some years; which, necessarily obscure in its symptoms, had been accurately diagnosed eight months before death; which, always fatal in its results, seemed to be undergoing a process of recovery; and lastly, which, though justly regarded as incurable, was evidently yielding to treatment.

CASE. G. K., a cook, aged 40, while working at a sausage-machine, in January 1854, felt that he had "ricked"* himself in the right side, in a point corresponding to the junction of the anterior parts of the right lumbar and right iliac regions. For two days, his urine contained blood; at first distinct, afterwards barely colouring it. From that time forth he had felt weaker, and less capable of prolonged exertion. In all other respects, however, he had been well; had experienced no pain; and had eaten, drunk, and slept, just as usual: he had always been temperate, and had an excellent appetite. His family history was quite free from any hereditary disease.

In June 1856, he discovered a swelling in his belly, which increased considerably in size prior to his admission as an out-patient in August.

On admission, he appeared to be a rather slenderly built man, of a pale yellow, and somewhat cachectic, hue; but quite devoid of jaundice or emaciation. He stated that the tumour gave rise to no pain, not even when handled or pressed; and was only inconvenient by the feeling of weight and dyspnœa associated with it. During the last month, he had once or twice vomited on rising from bed in the morning—apparently, mere saliva and bile.

An examination of the belly revealed the following state of parts, as represented by the annexed sketch made at the time.



The dotted lines indicate the situation of the following parts, as shewn by palpation and percussion externally.
e. Ensiform process of the sternum.
st st. Upper and lower borders of the stomach.
cæ. Cæcum, merging into the ascending colon (*co?*).
co co. Transverse and descending colon.
t t. Tumour, the umbilicus being near its anterior and upper extremity.

The belly was somewhat enlarged, but free from ascites. The liver, of moderate size, only touched the wall of the belly by a small part of its right lobe, so long as the patient kept to the recumbent posture. The stomach, of rather small size, seemed to have somewhat pushed up the diaphragm on the left side. The packet of small intestine appeared divided into two parts; one occupying the hypogastric region and part of the left iliac; one lying immediately below the stomach. The space it thus vacated was filled by a soft elastic mass, of elliptical shape, which passed downwards and forwards, from the outer margin of the spinal muscles in the right flank to about three inches beyond and below the umbilicus on the left side of the hypogastric region. The long borders of this mass were nearly parallel: the lower, however, somewhat convex, and the upper concave. The latter offered two or three distinct nodulations: the former, a single deepish depression or notch near its middle. The large intestine could be traced in nearly its whole extent.

* It is a pity this word, so much more expressive than "strained", and still used by the lower classes almost all over England, should have dropped out of the conventional language of authors and dictionaries. It is the *ruck* and *verrucken* of the German, slightly modified; and has no adequate equivalent (not even "wrench" is one) in English.

Beginning with the cæcum in its ordinary situation, it passed backwards and upwards a short distance, before crossing the lower margin of the tumour, over which it seemed to become very indistinct (flattened?). Exactly opposite to this point on the upper margin, it resumed its ordinary distinctness; and from hence was easily traceable along the upper margin of the tumour towards its anterior extremity. Continuing the same line, it reached the left lumbar region, immediately below the cartilage of the tenth rib, where it bent down into the descending colon, to be soon lost behind small intestine. The relation of the ascending colon to the tumour thus deduced (that of its crossing the mass at a right angle) was confirmed by the fact that, to the right of this place, there seemed to be no intestine whatever: the tumour thrusting away every thing else, and coming into direct contact with the wall of the belly.

Careful manipulation of the tumour quite satisfied me that there was no fluctuation present. Hence, in spite of its yielding character, I regarded it as solid. But one or two friends who examined it were inclined to regard it as a cyst filled with liquid: having assured themselves of a fluctuation, which, even after direct comparison with a thick-walled ovarian cyst then under my care in the hospital (a comparison confirming me in a conclusive negative), seemed to them to give a perceptible thrill. Tracing it upwards towards the liver, it seemed evidently to come into contact with the under surface of this viscus, but only at some distance from its anterior edge; so that, against the anterior wall of the belly, the tumour and the edge of the liver were separated by an interval occupied by small intestine.

Diagnosis. The variety and complexity of the details which require consideration in cases of this kind almost suggest the application of the old judicial rule—to give a decision, but not to give the reasons for it. In point of fact, the conclusion come to is generally based in a great measure upon the personal experience of the physician; and especially upon such parts of his experience—mere resemblances, analogies, or suggestions—as are, for all practical purposes, incommunicable. It was chiefly from the close resemblance of this case to two or three others which had fallen under my notice during the last ten years, that I felt competent to decide on its nature, and to diagnose it as a malignant tumour involving the right kidney. As regards the steps in that slower inductive process by which this impression was justified and confirmed, they seemed to be the following.

The local injury and the hæmaturia, owned to (but not volunteered) by the patient in telling his story, together indicated a connexion between the kidney and the tumour at the earliest stage of its growth. The consistence of the tumour suggested an elastic softness within a tolerably thick capsule: and this softness (supposing I was right in denying to it all characters of fluctuation) pointed to a malignant or encephaloid nature, which the patient's colour and aspect confirmed, and which the painlessness of the swelling was insufficient to refute. Its extension into the right hypochondrium, its lobulated surface, and its yielding consistence, might perhaps have suggested to some persons a resemblance to a cyst of the liver. But the absence of fluctuation of course negatived such a view: while, even apart from this fact, the mode by which the tumour passed up toward the liver (so as only to come into contact with it posteriorly, leaving an interval in front, where the small intestine came into contact with the wall of the belly) was quite unlike the ordinary relations of a cyst with this organ. Its relation to the large intestine confirmed this view of its renal origin, as did also its extension backwards into the right flank. The ascending colon seemed to cross over the tumour, by a comparatively narrow and undistended portion (*coli*). And this apparent course exactly coincided with the fact, that it was impossible to find any trace of this bowel elsewhere—as might have been expected, for example, had it been compressed behind the tumour. This, at any rate, referred the deepest and most fixed part of the tumour to the exact situation of the kidney itself.

Treatment. The patient was ordered to apply, externally, an ointment containing the iodide of potassium, in rather smaller proportion than the officinal ointment. This was to be rubbed in slowly and carefully every night, for about twenty or thirty minutes, before the fire. For internal remedies, he was prescribed an occasional aperient of castor oil, and three grains of the iodide of potassium, with spirit of nutmeg and decoction of bark, thrice daily. His diet—rather a generous one—was left unaltered.

In the course of a single fortnight, he began to speak very decidedly of the improvement which was taking place. The tumour, he said, was much softer, and even smaller; he felt it less weighty; and his dyspnœa had also diminished. The vomiting had altogether ceased.

After another week or two, I became convinced that his opinion was correct: that the tumour was decidedly smaller and more moveable, as well as much softer, than at first. The patient's strength, appetite, pulse, sleep, were all likewise improved. His colour remained as before; if anything, a trifle more pale, and less muddy, than at first.

From this period he remained under my care as an out-patient during seven months; retaining, and, in his own opinion, adding to, the above amendment. Once or twice during this time, he stayed away two or three weeks, having gone into the country for change of air. On two such occasions he returned, insisting that the deprival of his medicine had done him more harm than the fresh air had wrought of good. As, after careful and repeated inquiry, I could find nothing to entitle me to conjecture that the iodide of potassium (thus guarded by stimulants, tonics, and a generous diet) was doing him the least injury, I did not feel justified in suspending it for more than the above few days of its casual interruption.

Early in March, I became anxious for his admission into the Hospital. In spite of his protestations that he was constantly improving; that he was stronger, lighter, and more active; and that the tumour was (which, indeed, I could verify) constantly diminishing in size,—he appeared to me rather paler and more anxious. And finding, on inquiry, that he was threatened with a scantier diet, as a result of the inactivity to which his malady had condemned him, I persuaded him to enter the Hospital as an in-patient.

During the few weeks he remained in the Hospital, there was no change made in his treatment. He was placed on full diet, with a pint of stout daily. His appetite was excellent; he slept well; was cheerful, and even gay, in temper; and active in his movements. A few days after his admission, he had a slight attack of hæmaturia, during which the microscope detected isolated blood-corpuscles, but no casts of urinary tubules, in the urine. In two days, the urine resumed its healthy appearance, but shewed a cloudy albuminous reaction when tested with heat and nitric acid, and a few transparent fibrinous casts of tubules under the microscope. By and by, even these disappeared.

On the 28th of March, he left the Hospital, to avail himself of an opportunity of spending a few weeks in the country. As far as his own feelings or his appearance could suggest, he was much better than he had ever been since first he came under my care. On the 31st he called at the Hospital to see me, before leaving town. He then went home, ate a hearty dinner, and towards evening lay down on his bed to take a nap; and was found dead some hours after, having, to all appearance, died without a pang during sleep.

The Necropsy was made about forty hours after death, after an explicit statement of the nature and relations of the tumour, as diagnosed eight months before; and of the immediate cause of death, as suggested by the termination of the case (hæmorrhage). In the examination, I was assisted by Mr. Curran, whose zeal and ability in arduous pathological inquiries deserve acknowledgment.

The shape and situation of the tumour, as well as its relations to the other abdominal viscera, so exactly corresponded with the diagram of August 1856, that I need only refer the reader to it. The tumour, when removed, weighed 9¼ lbs. avoirdupois. On its inner margin, at a little distance from it, the surface of the spine was occupied by a tumour about the size of a small egg.

On further examination, the large tumour (which retained the soft elasticity noticed during life) was found to consist of (firstly) a capsule, nearly one-third of an inch in thickness, exhibiting a translucent fibrous structure when cut, and yielding a milky juice when scraped; and (secondly) a pulpy, irregularly laminated, opaque, dirty yellow mass, of a sticky, partially friable consistence. The two substances, however, merged into each other by gradations of structure at various parts of the periphery of the tumour, chiefly by an increase in the thickness of the capsule. In the centre of the pulpy mass was a coagulum of recent effusion, apparently corresponding to about three or four ounces of blood. Around this were what seemed to be relics of scantier hæmorrhage of older date, lying in close contact with a thick mass which occupied the inner or upper wall of the capsule, and projected inwards almost to the centre of the pulp. This mass was evidently renal structure mixed with new deposit, and gave off an ureter. The opposite kidney

was double the normal size, but healthy, as were all the other organs examined.

A microsopic examination quite confirmed the opinion which the unaided eye had formed respecting the nature of this mass. The pulpy substance turned out to be unmistakable encephaloid; the fibrous, a predominant fibroid development of similar cells, including in its close network a sparing quantity of blastema, and cells precisely identical with those of the pulp. The small masses on the spine were lymphatic glands affected with the same disease.

REMARKS. Without venturing to say what *would* have been the results of this case, had the hæmorrhage to which death was immediately due failed to occur, I may at least assert, that the above facts conclusively show a local and constitutional amendment, continuous up to the period of death, and explained (pathologically) by an arrest of nutrition and obsolescence of the diseased mass.

In respect to the *pathology* of this obsolescence, space would fail me to add to this brief record all the various details (not without interest) which this and similar cases that have fallen under my notice suggest. But some of these details are too important to be overlooked; for they seriously modify the practical aspect of cancer by indicating in no very doubtful manner the possibility—whatever may be the rarity—of a cure in some of the most threatening forms of this deadly disease.

And firstly, this obsolescence is, I am persuaded, far more frequent than is generally supposed: at least it is so in those internal cancers which generally fall under the notice of the physician. Of course, in many of these cases the fact of obsolescence is only important in a scientific point of view; the disease being so disseminated throughout the body, or so situated in this or that particular organ, as that the change can exert little or no benefit on the organism, much less influence the termination of the malady. Pathologically, however, the fact is of extreme value. And hence when we find (what I can confidently assert) that, out of a number of secondary cancerous masses sown throughout the lungs, one, two, or more are often in some stage or other of this change, varying from a dryish pulp, to a chalky substance extremely liable to be mistaken for cretified tubercle; or when we deduce—what I think is no very improbable estimate—that about one in every hundred primary cancers of the stomach evinces a still more complete alteration of the same kind, it is evident that we are stating facts which, if true, must seriously react, not only upon our diagnosis, but even upon our prognosis and treatment.

It is no matter that the patient, in the vast majority of instances, dies just as inevitably—in the one case, it may be, of the primary or coincident disease; in the other, of the local effects already produced by the now retrogressive mischief. Any considerations which may not only add accuracy to our knowledge, but may perhaps rescue a malady from the absolutely and necessarily fatal class represented by hydrophobia, are of inestimable importance. If confirmed by further inquiry, they suggest and enforce a resolute and minute attention to the therapeutical details of every case, such as must always conduce to the comfort (and therefore at least to the *euthanasia*) of the patient, at the same time that it constitutes, not only the attitude in which every Art wrings, as it were, its reluctant triumph from Nature, but the means by which we may occasionally help to save life.

The form of cancer most peculiarly liable to this process is, I believe, the encephaloid. And, as in this instance, the presence of a capsule appears still further to favour its occurrence. But it has been once or twice witnessed in colloid. And Rokitansky regards it as more common in the scirrhous variety: a view which at any rate suggests that it affects all three of the chief subdivisions of cancer.

In those cases which have fallen under my own notice, it has certainly appeared to me that the obsolescence itself has been mediated or conditionated by the characters of the tumour. It has been chiefly or exclusively the medullary or pulpy mass which has dried and cretified; and the cretification has so exactly mapped out the limits of a previous differentiation of tissue, that it has seemed probable this differentiation was one of the chief links in the process. Thus a medullary tumour like the above dries up as a mass within its capsule: a colloid becomes obsolete only in the softer masses which occupy its fibrous meshes: or a pulmonary deposit cretifies in a mass, which is shewn by careful microscopic examination to be more or less enclosed in compressed and distorted lung-tissue.

Supposing the capsulated character of the tumour really to favour the process, it would seem probable that this capsule, whether adventitious, like the remainder of the deposit, or normal, like the distorted lung-tissue, exercises such a salutary influence chiefly by its effect—physical, vital, or both—on the vessels that pass through it to ramify in the pulp which it surrounds and encloses. It is the presence of such interstitial vessels which forms one of the most characteristic distinctions between pulpy cancerous deposit and the tubercle it can (at least in the lungs) so well simulate. Hence it is by the detection of these vessels or their relics under the microscope, that we may sometimes best diagnose the true character of the mass, just as it is by their original scantiness, or their complete disappearance, that we are at other times left in doubt. In specimens of long standing, I am not aware of anything in the degree or kind of cretification which would be absolutely distinctive of cancer or tubercle; although the process is not only infinitely more frequent, but far more rapid and complete, in the latter of these diseases than in the former; and is, therefore, on numerical grounds, more likely to be due to tubercle in any given well marked instance.

The liability of such obsolescent deposits to hæmorrhage is well illustrated by the above case. That such a process of change—one might almost say, of degeneration and decay—in the whole mass, is likely to affect the nutrition of the vessels by which it is traversed, and hence to further their lesion under the ordinary fluctuations of pressure to which the circulating blood is exposed, is a proposition which, while it probably understates the directness of the causation, is abundantly confirmed by the hæmorrhage that attends the progress of cancer in general, and of its softer forms in particular.

The diagnosis and treatment demand little further notice; though it seems probable that the peculiar structure (or rather arrangement) of the tumour would go far to explain some interesting features of both.

In respect to the *symptoms*, for instance, it is difficult to avoid connecting the painless character of the swelling with the presence of the tough limitary capsule which surrounded and isolated its pulpy contents, so as to shield the neighbouring tissues from all direct interference.

As regards the results of the *treatment*—even supposing that the amendment actually witnessed was in no degree explicable as one of those coincidences so dangerous in their influence on the art of medicine—there could be little doubt that it was greatly furthered by the same circumstances. So far as I dare conjecture, I should think that the inunction was the most efficient part of the treatment. It is not difficult to imagine that steady and gentle local friction of this kind, continued month after month, might well exercise a powerful action upon a delicate pulp, such as formed the bulk of this tumour. It is probable, too, that the ointment improved the quality of this friction, besides introducing a considerable amount of the iodide of potassium into the system. But, had the tumour been as painful (or even as tender) as such masses generally are, it is evident that no measure of this kind could have been justifiably adopted. Whether, apart from the peculiar arrangement of the tumour, the iodide really exerted any specific influence upon the process of obsolescence, by lowering the nutrition of the mass, is a question which, interesting as it is, no single case of this kind can decide. But the power over the absorption or resolution of tumours, attributed to this drug by the older writers, must surely have some facts to rest upon. And instances of this kind, supposing them now and then to occur, would rarely be capable of being verified by a necropsy, since the patient, once recovered, would generally be lost sight of. Hence it seems of peculiar importance to place on record a case like the foregoing, which is interesting, not only because it confirms (or at least explains) some of those traditional virtues of this drug which are least frequently seen in ordinary practice, but because it indicates under what pathological circumstances they are most likely to be efficacious. It is no small recommendation of such a plan to add, that, unlike some other remedies, such as mercury and antiphlogistics, the use of iodide of potassium is perfectly compatible with the fulfilment of other rational indications in the treatment of cancer; and hence that, with proper precautions, we may feel perfectly sure we are doing no harm, even if (as will too often be the case) this and every other drug fail to do any good.

Brook Street, Grosvenor Square, May 27th, 1857.

BIRMINGHAM AND MIDLAND COUNTIES EYE INFIRMARY.

CASES OF EXCISION OF A DISORGANISED EYEBALL, FOR RELIEF OF AMAUROSIS OF THE COMPANION EYE.

By James Vose Solomon, Esq., F.R.C.S., Surgeon to the Infirmary.

[*Abstract of a Paper read before the Birmingham and Midland Counties Branch, April 9th*, 1857.]

Certain traumatic and chemical injuries of the eye frequently cause sympathetic disorder in the companion organ; and where the internal tissues of the latter assume a chronic congestive or inflammatory condition, the success of medical treatment is very uncertain. The *early* symptoms of the sympathetic disorder vary considerably in character and in pathological significance; and therefore, for practical as well as for didactic purposes, it is convenient to attempt their classification. I would suggest the following, as being, in my experience, clinically accurate so far as it goes.

1. *Erethism of the Ophthalmic Division of the Fifth Pair and of the Retina*, a result of reflected nervous irritation, is manifested by intolerance of light and epiphora; the ocular structures being healthy, with the exception, perhaps, of redness of the conjunctiva, and congestion of the lids. These symptoms not unfrequently appear on the day of the accident, and remit, *pari passu*, with the subsidence of the traumatic irritation. When the pain from the latter is not very great, vision is clear at twilight, indicating that the retina is organically sound. The presence of a cretaceous or osseous formation in a disorganised or collapsed globe is sometimes an excitant of this exalted nervous sensibility; and when the latter has existed a long period, the retina is liable to become enfeebled: it may coexist with a form of ophthalmia not usually attended by photophobia. Allied to the preceding nervous disorder is neuralgia occurring in paroxysms, during which the patient is blind: it is generally symptomatic of mechanical irritation in the fellow-eye.

2. *Disorder of the Adjusting Apparatus of the Eye* commonly occurs six or eight weeks after the injury, and in cases where the primary irritation has apparently subsided. The patient may become permanently long-sighted.

3. *Hyperæmia of the Retina and Choroid* is denoted by a sense of *malaise* in the eye, and intolerance of use when it is directed to small objects, which are seen clearly so long as the patient can bear to look.

4. *Congestion or Inflammation of the Posterior Internal Tissues of the Globe* is indicated by some of the following symptoms:—Muscæ volitantes; clouds intercepting the view of objects; a gauzy mist; impaired vision; sluggish pupil; red or yellow flashes in the dark. This is the congestive amblyopia of authors.

5. *Inflammation of the Retina* is diagnosed by persistent dimness of vision; tolerance of light; a circumcorneal zone; the lens, iris, cornea, and aqueous humour, being at the onset normal, also the external membranes, except the zone. As the disease advances, (*a*) the iris inflames; the pupillary border contracts and adheres to the lens, its sharply defined edge is lost, and its movements are annulled; sight is much impaired: or (*b*) amaurosis supervenes, and the pupil dilates: or (*c*) the vitreous humour softens, the globe sinks: or (*d*) cataract forms.

6. *Iritis*—the arthritic iritis of authors.

7. *Acute Choroiditis* is marked by fever, violent pain in and around the eye, great intolerance of light, fiery spectra day and night, rapid loss of sight, etc.

The diseases classed 4, 5, 6, 7, and any modifications or compounds of them, generally prove rebellious to depletion, medicines, and blisters; and terminate, if the patient have the good fortune to escape complete loss of sight, in a serious degree of impaired vision: they are therefore cases which, in my opinion, should be combated at an early period of their existence by excision of the primarily diseased globe. I would refer those that are sceptical of the soundness of these views to a valuable table of twenty cases, where injury to one eye had resulted in the blindness of both, published by Mr. Augustin Prichard in the Association Medical Journal for October 6th, 1854, p. 909; also to an instructive series of cases recorded by Dr. Mackenzie in the fourth edition of his *Treatise on the Eye*, p. 611; to cases in the volume of the *Lancet* for 1855, by Mr. Critchett; and to those that I shall presently relate from my own practice, in which excision was performed.

The merit of applying excision of the *entire* globe to the treatment of sympathetic internal ophthalmia belongs to Mr. Augustin Prichard of Bristol, who published his first case in 1851 (*Provincial Medical and Surgical Journal*, Feb. 5th, p. 66). The principle of the operation is as old as medicine itself, and has been acted upon from the earliest ages: viz., the removal of the cause of a disease, in the hope that its effects would cease.

I consider that the persistence of the sympathetic disorder cannot be referred in *all* cases to irritation (*e. g.*, an earthy lens) or inflammation in the organ primarily injured (for cases occur in practice where neither of these states exists, and yet excision proves eminently serviceable), but to a disposition in the tissues of the healthy eye to conform their nutrition to that of its disorganised companion. Consequently, the mere evacuation of some of the humours of the diseased globe by incision or excision of the walls of its anterior chamber (partial excision), must ever be a less satisfactory proceeding than ablation of the whole eye. By the latter operation, the case is, on the principle of exclusion, much simplified; and if the intention of it be not fulfilled, the surgeon will know that he has to deal with a constitutional disease, or with a local one where morbid changes beyond the power of nature or medicine have taken place. Moreover, excision performed on the method of O'Ferrall is neither followed by hæmorrhage of any amount, inflammation, suppuration, pain, or constitutional disorder; whereas, after the minor operation, I have in some cases met with severe hæmorrhage, painful distension of the globe from effused blood, followed by sclerotic inflammation, great suffering, and symptomatic fever. Further, the stump of a collapsed eye may become the seat of an osseous or melanotic deposit. An example of the latter has fallen under my care.

Case I. *Excision of a disorganised Eye: Cure of a persistent Dimness of Sight in the companion Organ.* Samuel Spittle, a healthy miner, of short stature, 60 years of age, probably intemperate, residing at West Bromwich, came under my care at the Birmingham Eye Infirmary on August 12th, 1856. He had received, ten weeks before, a blow on the *right* eye, which caused inflammation and blindness. The cornea having sloughed, the front of the eye was flattened and opaque; the globe was neither painful nor inflamed. The *left eye* became dim a week after the accident; it was, at the time of admission, painless, incapable of distinguishing colour, or one person from another; a cloud appeared to be constantly before objects. A few short trunks of red vessels, arranged in a crescented form, were observed on the sclerotic, terminating at about one-twelfth of an inch from the lower and outer border of the cornea. The pupil was small, round, and fringed with pigment at its upper and outer border, insensible to the stimulus of light, and, as I afterwards ascertained, to atropine. The iris, of natural appearance, was adherent to the lens. The globe was of normal tension.

The patient's only complaint was the dimness, which disabled him from every kind of employment. His sight, prior to the accident, had been quite good; he had never worn spectacles, or learned to read.

My *diagnosis* was, slow inflammation of the internal tissues, which had probably commenced in the retina.

The *treatment* consisted in the application of six leeches to the left lower lid, and five grains of blue pill to be taken on each of six consecutive nights. Two tablespoonfuls of a terebinthinate mixture were also given three times a day. Pustular irritation was induced over the left mastoid region. At the end of three weeks, one-sixteenth of a grain of bichloride of mercury, in bitter infusion, was substituted for the turpentine; and the counterirritation was continued. After a month's use of the bichloride, iodide of potassium was given in its stead, and persevered with till December 10th, when, as no improvement had taken place, with the assistance of my friend Dr. Marshall, I excised the globe. The whole of the sclerotic conjunctiva, muscles, and orbital fat, were left in the orbital cavity. The presence of heart-disease precluded the administration of chloroform. The patient, who had a draught of hot brandy and water and some opium after the operation, soon went to sleep, passed a good night, and never afterwards suffered the least pain or inconvenience of any kind. The operation caused the loss of a few drops only of blood, and was not followed by suppuration. There was nothing in the man's condition to contraindicate his discharge on the seventh day after the operation: he was, however, detained till the expiration of his note.

At this early date, he considered he could see large distant objects with greater clearness. In six weeks after the performance of excision, he was able to identify persons, distinguish colours, and the size and form of black objects of the diameter of half a line. As he did not know the letters of the alphabet, it was impossible to test his vision with type of different sizes. The cloud had been exchanged for muscæ volitantes. On March 24th, he was supplied with a pair of thirty-inch double convex spectacles, and directed to come again in a month.

April 28th. My notes state:—No black specks interfere with vision when he wears spectacles. Every object is seen with perfect clearness, even the most minute black spot. Since his last visit, the black specks (muscæ volitantes) have lessened in number and density, which he attributes to the use of the spectacles. On one occasion he got drunk, and his sight became as bad as it ever had been, but cleared after the operation of an aperient dose—the only medicine taken since the day of the operation.

CASE II. *Excision of a disorganised Globe: Relief of much impaired Vision of the companion Eye—a Result of Choroido-Iritis.* Wm. Hollins, 31 years of age, a silver-plater, of intemperate habits and an immoderate smoker, suffered four years since an accident to his left eye, from mortar which was thrown into it. Severe inflammation, pain, and loss of sight, were the consequences; but he did not obtain medical aid till a month after the injury, and then because the companion eye had become inflamed, affected by shooting pains, and circumorbital aches: "the globe felt as if it were being thrust out by a crowbar". On the third day of the ophthalmia, a red ring appeared before the eye, and continued day and night; also a cloud, which intercepted the view of objects. The sight diminished daily, and, at the end of six weeks, even artificial light was invisible. In three weeks from that time, the ninth of the sympathetic ophthalmia (choroiditis), the inflammation subsided, and he could identify persons; but neither reading nor writing was practicable. He took work on a coal-wharf, emptied boats, and served customers. Toward evening, men could not be distinguished; and he made his way along the streets by noticing the direction of the gaslights. He remained at the wharf two years.

During May and June 1856 the vision became much worse; and on July 14th he was compelled to become an inmate of the Birmingham Workhouse. The next day my friend Mr. W. T. Fernie, the intelligent house-surgeon of that establishment, sent him to me at the Eye Infirmary in charge of a guide. On that day, July 15th, the following was the appearance of the eyes. The pupil of the *right eye* was contracted, central, and of rather irregular form: its outer two-thirds were occupied by a delicate translucent adventitious membrane. It was insensible to the stimulus of light and to atropine. The iris was bluish gray. On the sclerotic were observed some enlarged vessels of pink colour. The cornea was clear. A guide was essential for his safety in the streets and in the house, little besides light being recognised. This condition of the eye I regarded as due to acute choroido-iritis which had passed away, leaving a chronic postero-internal ophthalmia.

The *left eye* was larger than its fellow. It was insensible to the brightest light; the lens, of earthy consistence, was tremulous, the iris discoloured, the sclerotic was unattenuated, but pervaded by numerous varicose vessels. Occasional pain in the globe and forehead, of insignificant degree, was felt.

The treatment consisted in a good diet, including meat and ale; counterirritation behind the right ear; and bichloride of mercury in bitter infusion used internally for three weeks, when iodide of potassium was substituted for it, and gray powder, with extract of hemlock (five grains of each) given every night. These means were used for more than two months without improvement to the sight.

At the expiration of the thirteenth week of treatment (Oct. 14th) the syrup of iodide of iron was prescribed in the place of the preceding remedies. Under its influence, the general health and the vision of the right eye greatly improved; he could see a barrow at twenty yards, and became the guide of a blind man from the workhouse to the Eye Infirmary, a distance of two miles; but he could not distinguish colours.

No change took place till Nov. 7, when the right eye suffered from choroido-iritis and serious imperfection of sight. The posterior chamber appeared, as on his first admission, to be filled with smoke. For this attack he was carefully treated about six weeks, at the end of which the vision was as imperfect as on the patient's admission, although the eye was not inflamed, and the aqueous humour had regained its transparency. As a forlorn hope I excised the left globe, in which no change whatever had taken place since the patient first came under treatment. The operation was performed on January 21st, 1857, the patient having been rendered insensible by the inhalation of chloroform. Dr. Marshall kindly afforded his intelligent assistance. The chloroform disordered the stomach very much, as was evinced by sickness and loss of appetite, which continued several days. At night the patient was restless and wakeful. The wound healed rapidly without pain, inflammation, or suppuration.

On the seventh day after the operation (January 28th) he was seized with ophthalmia of a similar character to that last recorded, in consequence of having carelessly exposed the eye to cold air, and bright fire-light. The inflammation quickly yielded to the application of a few leeches and the ingestion of eight doses of calomel and opium. He left the Infirmary at the expiration of his note, previous to which the sight was so far improved by the operation that he could find his way in parts of the town to which he was a stranger. Mr. Fernie, in a letter addressed to the secretary of the Eye Infirmary, dated March 3rd, says: "Previously to the admission of this patient (Hollins) into the Eye Infirmary his vision had been gradually failing for four years past; so that, when sent to you, he was quite unable to discern any object at the distance of twenty yards from his person in broad daylight. He now rejoices in the ability of clearly distinguishing houses, trees, and individuals distant two hundred or three hundred yards; he clearly sees the preacher in the chapel (which he has failed to do for four previous years). His sight continues daily to improve simultaneously with his general health, spirits, and appearance."

On April 23rd Hollins read a few lines in a work printed in long primer type. When the day is sunny he can manage to write a little.

CASE III. *Traumatic Injury of Right Eye: Sympathetic Erethism of the opposite Organ, followed by impaired Vision: Excision of Right Eye: Great Improvement.* James Smith, aged 32, a soda-water bottler, healthy, but constitutionally feeble, accustomed to a good diet, not intemperate, but a great smoker, suffered on the 1st of August, 1856, a small laceration of the *right* cornea and rim of the sclerotica, from a fragment of a soda-water bottle that burst while he was corking it. The wound, which was uncomplicated by protrusion of the iris, received almost immediate treatment; and on the fourth day from the accident the case came under my notice at the Eye Infirmary. I prescribed closure of the lids, rest of the eyes, meat and beer, and, as medicine, bark and ammonia. A decidedly tonic plan—including quinine and iron—was pursued for fourteen weeks; in the meantime the wound, unattended by inflammation, slowly healed, the size of the globe gradually diminished, the vision became nearly extinct, the cornea, lens, and humours, retaining their transparency. The want of reparative power was more marked in this case than in any other I have witnessed.

The *left eye* became, immediately after the injury, painfully sensitive to light and heat; and in about a fortnight the sight was feeble. These symptoms continued up to November 7th, when I excised the *right* lobe, which was a third less than its companion, by O'Ferrall's method. On that day, the left pupil was dilated, and the contractions of the iris were not sustained when the eye was exposed to bright light. Newspaper type appeared rather indistinct, and could be read for a short time only.

On the day following the operation (which was performed while the patient was under the influence of chloroform), the pupil was contracted to its natural diameter; and on the third day he told me that he read newspaper type clearly—a gain, as respected distinctness, that was not permanent. The immediate and permanent effect of the operation was to render the left eye perfectly comfortable when exposed to bright light or heat. Neither pain nor inflammation followed the excision, and the patient was in every way fit to leave the Infirmary in seven days afterwards.

April 9th. Vision was improving, especially of distant objects. The man was altogether satisfied with the result of the excision. The disorganised globe did not contain a foreign body.

CASE IV. *Loss of Sight of Left Eye from a Burn: Sympathetic Impairment of Vision in opposite Organ: Successful Excision of Left Eye.* John Jones, seventeen years of age, healthy, with pale complexion and auburn hair, a roller of hot metal, suffered from a burn in his left eye in May 1855, which blinded it instantly, and for ever. The vision of the *right* became

so seriously embarrassed that he could not decipher type, nor even see persons that were quite close to him. At the end of a fortnight it (the right eye) had improved, and persons could be seen and known at half a dozen yards distance. The sympathising eye was very red, and watered on the morning following the accident, and continued in this state for weeks.

The burnt eye, which was poulticed several times a day under the direction of a surgeon, discharged much matter. There was considerable constitutional irritation, severe headache, great thirst, and loss of appetite, for the relief of which purging medicines were taken.

At the expiration of sixteen weeks from the date of the accident the right eye had sufficiently recovered to allow of a resumption of work, but in a day and a half he was obliged to "knock off"; the sight having "suddenly become dull," he had got entangled by his trousers in the machinery.

Jones was admitted an in-patient of the Birmingham Eye Infirmary in the fourth week of October, 1855, at which time the lids of the *left* eye were adherent to the globe, and the front of the latter was covered by a red and thick mucous membrane. There was no pain. The pupil of the *right* eye was dilated, and feeble in its contractions when suddenly exposed to light, soon relaxing into a dilated condition. Quarter-inch type was the smallest he could distinguish. At times clouds passed before the eye; at others he became suddenly blind for a short period. Anæsthesia having been induced by chloroform the left globe was excised on the 31st of October. No bad symptoms followed. On the thirteenth day after the operation the vision was nearly as good as it ever had been, and he left the house. At a subsequent period he fell into poverty, and the vision relapsed to the state it was in immediately previous to the operation; he got tonics and better living, recovered, and in four months after the operation, the last time he was seen, the sight was as good as it had been before the burn.

CENTRAL LONDON OPHTHALMIC HOSPITAL.

ADHESION OF THE EYELID TO THE EYEBALL, OR SYMBLEPHARON: ITS USUAL CAUSE AND MODE OF FORMATION: EXAMPLE OF THE RARER KIND: ADOPTION OF BLANDIN'S METHOD OF OPERATING: SATISFACTORY RESULT.

By R. Taylor, Esq., Surgeon to the Hospital.

The object of the following communication is to introduce to the notice of the profession a very ingenious operation devised by M. Blandin, for the relief of symblepharon, or adhesion of the eyelids to the eyeball.

For the benefit of those who have not paid much attention to ophthalmic surgery, I may be permitted to make a few remarks upon the nature and cause of this distressing affection. With very few exceptions, it is the result of some injury, as from molten metal, lime, strong acids, etc., by which a portion of the membrane covering the eyelids and eyeball has been destroyed. The raw surface left upon the separation of the slough heals in the usual manner by granulation; the cicatrix thus formed, as in other parts of the body, gradually contracts; and the result is, that the palpebral sinus is obliterated to an extent corresponding with the seat of the injury, and the eyeball and eyelid are bound together by a dense unyielding tissue, by which the movements of the eye are more or less impeded, and a disagreeable sense of constriction attends every motion of the uninjured eye. In the great majority of instances, the seat of injury is the lower eyelid; and not less frequently the cicatrix extends so far over the cornea as to shade a part or the whole of the pupil, and thus to impair or destroy vision.

This explanation of the mode of formation of symblepharon differs, as I am well aware, from that which is commonly offered, which attributes the union to the adhesion of the opposed raw surfaces, as happens in the case of two adjacent serous membranes when inflamed. But the cases appear to me to be altogether different. In the latter, without any breach of surface, lymph is thrown out, which, when organised, becomes the uniting medium; in the former, there is loss of substance, exactly as occurs in a burn in any other part of the body; and the subsequent processes are identical, namely, granulation, cicatrisation, and contraction. It is farther borne out by surgical experience, which shows that here, as in other parts of the body, mere division of the bond of union is unavailing, notwithstanding the most sedulous efforts to prevent contact between the newly formed raw surfaces.

Where the uniting band is but narrow, we have the choice of several operations, each of which offers a fair prospect of success. As a general rule, that proposed by Mr. Wilde is perhaps the best. It consists in dissecting out the cicatrix, and bringing together the edges of the conjunctiva, both on the eyeball and the eyelid, by sutures. But where the adhesion is extensive, this, as well as all of the ordinary operations, is inadmissible; and the unanimous opinion of ophthalmic surgeons declares such cases to be beyond the reach of surgical interference. It is to such, otherwise hopeless cases, that M. Blandin's operation is applicable. Those who wish to refer to the original will find it in the *Gazette Médicale* of 1840.

In August 1856, I had an opportunity of putting it to a trial. A very intelligent lad, 15 years of age, applied for relief at the Central London Ophthalmic Hospital, under the following circumstances. Nearly a year and a half previously, he had received a severe injury in the right eye, and a less serious one in the left, from lime, for which injuries he had been treated for some months at a hospital. His state, when I first saw him, was as follows. The right eyeball and lid were united by a dense firm cicatrix, extending nearly the whole length of the palpebral fissure, and upwards over the cornea so as to conceal the pupil, with the exception of a small chink, which was obscured by a faint milky opacity. Every attempt at moving the eye was attended by a most disagreeable feeling of constriction; and the sight was so far impaired that he could not make out the largest print. In the left eye, the consequences of the injury were so slight as not to require surgical interference. There were a few loose bands of adhesion at the bottom of the palpebral sinus; and, though the lower part of the cornea was obscured by opacity, this did not trench upon the pupil, and vision was unimpaired.

The operation upon the right eye may be described nearly in M. Blandin's words. The cicatrix was carefully dissected from the cornea and sclerotica in its whole extent, until the eyeball was completely free; and the dissection was continued until the bottom of the palpebral sinus had been reached, and the bony margin of the orbit could be felt with the finger. There was thus left a broad thin flap of cicatrix, adhering to the tarsal margin of the eyelid. This was then folded in, in the manner of a hem, so that its smooth surface, which had formerly been external, was now in apposition with the raw surface of the eyeball, and a lining was provided for the eyelid to the very bottom of the palpebral sinus. In this position the flap was retained by two sutures passing through the entire thickness of the lid, and tied externally on the skin of the face.

The subsequent progress of the case may be thus condensed. One of the sutures was, unfortunately, detached by the efforts of the patient, who did not understand its importance; and I was not informed of the accident until it was too late to replace it. The other was removed on the fifth day after the operation. The outer three-fourths of the flap adhered to its new position, leaving a palpebral sinus of the natural depth. At the inner part there was still a narrow elastic band between the eyelid and the lower and inner part of the cornea, which, however, did not interfere with the free movement of the eye. A subsequent attempt to get rid of this adhesion was unsuccessful. The opacity which formerly covered the cornea has been removed, partly by operation and partly by absorption, to such an extent that three-fourths of the pupil are now perfectly clear; and the vision is almost, if not altogether, as good with this eye as with the other. So little irritation was produced by the operation, that the lad returned to his work (that of a plasterer) the day after the second suture was removed.

Although, owing to the unfortunate detachment of one of the sutures, the success of this operation has not been so complete as it might otherwise have been, still the relief afforded in a case which is universally condemned as hopeless has been so striking, that I earnestly trust that this very ingenious and simple operation may have a further trial in this country; this, so far as I am aware, having been the only occasion on which it has been performed. Among the labouring and manufacturing population, who are in an especial manner exposed to the accidents by which symblepharon is produced, there must be many who are suffering from all its inconveniences, who would gladly avail themselves of any chance of relief by surgical means, and who might perhaps ere now have been relieved, had this mode of operating been known and attempted. To speak confidently, from the results of two operations (M. Blandin's and my own), would be premature: all I would wish to enforce is, that the method proposed appears to be founded on just and scientific principles; that it is the only one hitherto proposed which is at all likely to be adopted in this country for the relief of a very distressing affection, hitherto

considered as irremediable; and, finally, that it has proved successful in the only two instances, so far as I am aware, in which it has been performed.

I would merely add that, so far as I have had an opportunity of judging, the operation is admissible only in those cases in which the adhesion is extensive; where the connecting bands are narrow, others, especially that of Mr. Wilde, are preferable. Had I again to operate in a case such as I have above described, I should apply, and apply very securely, three points of suture, firmly fixing the flap in its new position so long as the sutures did not appear to produce too much irritation.

Original Communications.

CASES OF PUERPERAL CONVULSIONS.

By FREDERICK MASON, Esq., Bath.

[*Read before the Bath and Bristol Branch, April 29th*, 1857.]

CASE I. On December 30th, 1850, about mid-day, I received a message to visit Mrs. T., then in the last month of pregnancy with her first child. She appeared to be perfectly sensible, and able to describe all she felt, and complained chiefly of an intense pain in the epigastrium. She had not as yet any symptom of approaching labour. I prescribed remedies for the relief of this pain, and left. At 7 P.M., I received another message to visit her, and found her still complaining of great pain in the epigastrium. I had been in the room a short time only, when she had a violent fit of convulsion, which lasted a few seconds, and then left her in a state of insensibility. The fit was quickly followed by another, which subsided as before. Although the os uteri, which appeared thin and rigid, had not commenced to dilate, yet I found, on placing my hand over the fundus, that uterine action had begun; the convulsion beginning with and subsiding with each contraction of this organ. I now, in addition to other remedies, bled her to ℥xx, which moderated the violence of the attacks, though they still returned with each pain.

The dilatation of the os uteri went on very slowly; and, as the labour advanced, the fits became more severe. I again bled largely; and she also lost a quantity of blood from the slipping of the bandage during her struggles. The violence of the convulsions was again lessened, but they returned with each pain, until the os uteri was fully dilated, and the head of the child descended low in the pelvis. She was delivered of a still-born male child, about 8 o'clock A.M., on December 31st. She remained in a comatose state for two days, and then slowly recovered; but had no recollection of anything that had taken place—not even of the first pain in the epigastrium.

She shortly afterwards removed to London, where she had a second child, without convulsions; but in a third labour, she again suffered from them, and died.

CASE II. Mrs. D., a laundress, aged 22, short, but rather stout, pregnant for the first time, had suffered during pregnancy from swelled legs and feet. On the morning of Dec. 3rd, 1851, being in the eighth month, she was in her usual state of health; but towards the middle of the day she complained of pain in the head, which soon became intense. I saw her soon after 5 P.M., and found her complaining of great pain in the head; the face was flushed and slightly swollen; the bowels were costive, although they had been relieved on the previous day; her legs and feet were œdematous. Pulse 90, without much power. She answered all questions rationally, and begged to be allowed leeches to the temples. I ordered her to apply twelve directly, and to take aperient medicine until the bowels were relieved.

At 8 P.M., I was requested to visit her again as quickly as possible; as, soon after I had left her, she became insensible, and her friends were alarmed by her loud snoring. I found her lying as in a fit of apoplexy, with stertorous breathing, etc.; but she soon had an attack of violent convulsion, which lasted several seconds, then left her, and after a short interval returned. On placing the hand on the abdomen, it was evident the convulsions were connected with contractions of the uterus, as they occurred each time a pain commenced, and subsided with it. On making a vaginal examination, I found that the os uteri was dilated sufficiently to allow one finger to pass readily into it, and that the head of a small child presented. The os uteri felt thick, hard, fibrous, and undilatable. She had applied only four leeches. I now bled her to ℥xx, cut off her hair, and applied cold to the head. This bleeding had the effect of moderating the violence of the convulsions, which now passed into a state resembling severe tremor of the whole body.

11 P.M. She had had no return of the convulsions, but had become semi-conscious, cried out with each pain, and at the same time placed both her hands over the abdomen. I applied a blister to the nape, and administered an enema, which soon returned, bringing with it some fæces.

She continued in a semi-conscious state until 2 A.M. December 4th, when she again became violently convulsed. The fits again occurred as violently as at first; and as the pulse had risen, I bled her again to ℥xvj, with an effect similar to the first; the convulsions did not occur again; she became more conscious than before; and after an hour or so, complained of feeling cold.

The os uteri dilated very slowly. At 4 A.M., it was dilated to about an inch and a half in diameter; but neither the membranes nor head appeared to advance; and as the latter seemed to be resting on the os pubis, I passed my finger higher to ascertain the fact, and accidentally ruptured the membranes. The uterus now dilated more quickly, and in another hour dilatation was complete; and at six o'clock I applied the forceps, and finished the delivery; and the placenta immediately followed. The child was dead.

She was in an exhausted condition, and only to a slight extent conscious. She continued much the same until the evening of the 5th, when she became more conscious, and then gradually recovered, but had no recollection of anything that had taken place on the day before her delivery.

She has since had three children, without convulsions in either case.

CASE III. On September 12th, 1852, at 1 A.M., I was summoned to attend Mrs. H., then at the full term of pregnancy with her first child. She was a delicate, slightly made woman, a dress-maker, accustomed to sit very closely to her work, frequently without taking any rest at night. I found that labour had just commenced; and with what appeared to be the first pain, she had had a fit of convulsions. No premonitory symptoms had been noticed. With this exception, this case resembled the previous ones—the fits came on and left with every pain. The pains were frequent and regular; yet the os uteri, as in the other cases, dilated very slowly; and it was not until 5 P.M. that it was sufficiently open to enable me to apply the forceps, when she was delivered of a very small female living child. The fits now ceased; but she did not recover consciousness until the afternoon of the next day.

In this case, I took only about ℥viij of blood from the arm.

She has since borne two children without any return of the convulsion.

CASE IV. On May 28th, 1856, at 10 A.M., I saw MRS. B., who was pregnant for the first time. She had been in pain nearly all night. The os uteri was undilated, and had a thin sharp edge.

2 P.M. The os was slightly patulous, but still thin and rigid. The pains occurred regularly; and there were no symptoms to excite apprehension.

8 P.M. The os uteri was dilated to the extent of an inch and a half in diameter, and had become soft and dilatable. The vagina was well lubricated with mucus. Dilatation now proceeded rapidly, and the head descended into the pelvis; when the secretion in the vagina ceased, and it became dry. Still she appeared comfortable, and talked in the interval of pains; when suddenly, without previous warning, and during a pain, she became violently convulsed and unconscious. The fit ceased with the pain. I took ℥x of blood from her arm, and sent home for the forceps. As soon as they arrived, I applied them, and delivered her of a living female child. With the pain that expelled the placenta, she had another attack of convulsions; but within an hour after the emptying of the uterus, she became sensible, and recovered.

June 9. I have since attended her in a perfectly natural and quick labour, from which she has recovered without any adverse symptom.

REMARKS. I did not examine the urine in either case; but if I had discovered the presence of albumen, I should have considered it a consequence, and not the cause, of the convulsions. For it must be remembered that true puerperal convulsions seldom occur in other than women pregnant for the first time, and in whom no suspicion has existed of previous disease. I think the cause is to be sought for in great nervous irritability increased by the undilatable condition of the os uteri and vagina.

ON CERTAIN CASES IN WHICH THE FORAMEN OVALE WAS STILL PATENT IN THE ADULT.

By John W. Ogle, M.B.Oxon., F.R.C.P., Assistant-Physician to St. George's Hospital.

In the year 1851, whilst curator of the Pathological Museum at St. George's Hospital, I took the opportunity of examining above one hundred and forty human hearts taken indiscriminately after death, for the purpose of ascertaining the condition of their muscular fibres.* Of this number, I examined sixty-two with a view of discovering the condition also of the foramen ovale, and found that out of the sixty-two, there were thirteen hearts which retained this foramen yet incompletely closed, although to a variable degree; thus giving a proportion of about one in five hearts in which communication of some kind or other existed between the cavities of the two auricles. This is, I believe, a greater proportion than is generally considered to exist in the healthy human adult heart.

These particulars, observed at the period I mentioned, have hitherto not been made available by me; but I have retained them in my note-book, thinking that at a future time some opportunity for their use might occur. Such an opportunity has been offered, in consequence of the observations of my friend Dr. Markham, regarding a case published by him in the number of this Journal for April 4th, 1857. In this case of Dr. Markham's, a loud murmur coincident with the systole of the ventricles, and therefore synchronous with the diastole of the auricles, was heard along the base of the heart and in the entire left subclavicular region. Of some of his remarks in connexion with the case, I shall speak at greater length further on.

Having mentioned the fact of the comparatively frequent occurrence of an incomplete closure of the foramen ovale, I must qualify the observation by remarking, that the patency noticed allowed of very different degrees of communication between the two sides of the heart. In some of the cases, the opening remaining in the septum of the auricles was a mere fissure or oblique slit, arising simply from want of such an adhesion between the valves and the margins of the isthmus, as is wont to exist after the completion of the drawing up of the valvular fold and other preliminary contractile actions of neighbouring parts. This defective adhesion, I may remark, is thought by Dr. Peacock to be the result of unequal pressure in the auricles from the blood, owing to the slow establishment of the pulmonary circulation after birth. The oblique slits, to which I have alluded, were directed variously, as it were, opening in some cases more widely from above, and in others from below, and would have allowed of the blood passing, as it would seem, more freely in some cases from the left into the right auricle, but in the majority of cases from the right into the left auricle. In several of these cases, the communicating opening was not merely that of a chink or slit, but was a decided round or oval aperture; in one case, admitting of the entrance of the tip of the little finger. In one or two cases, the opening was of a reticular character, having the appearance as if it had been produced by a falling short of one part of the margin of the valvular fold, so that it failed to be raised to the level of the isthmus, to which it ought to have been adherent; and as if the deficiency had been in part compensated for by bands passing across the vacancy. I was careful in my search for any trace of ulceration or of rupture which might have accounted for the opening, but this did not in any case exist.

I have lately referred to the life histories of those cases which I have mentioned as presenting an imperfect closure of the foramen ovale, in order to ascertain what physical signs were noticed before death, which might be attributed to this imperfect closure.

I will now enumerate the cases, and describe briefly the condition of the heart and also of the lungs in each of the thirteen cases in which I found the foramen only partially closed. Afterwards, I will add a short statement of the stethoscopic signs as observed during life, whenever I find that they were noted by my friend and colleague Dr. Barclay, who at that time was medical registrar at St. George's Hospital.

Case I. A patient, aged 41, affected by pneumonia, rheumatism, and eventually pericarditis. The chest was carefully stethoscoped when the patient came into the hospital, and special search was made for signs of peri- or endocarditis, but no *bruit* or friction-sound whatever was heard. After a time, when the anticipated pericarditis had appeared and become established, the ordinary murmurs were heard.

Case II. A patient, aged 37, was admitted into the hospital, and died with pulmonary phthisis and vomicæ. After death, the heart, which weighed eight and a half ounces, was found healthy and natural, excepting the patency of the oval foramen. In the life history it is expressly observed that "the only thing made out by physical exploration of the chest was slight harshness of breathing on the right side of the chest." These particulars are given, but there is no mention whatever of any unnatural sounds about the heart.

Case III. A patient, aged 25, was admitted into the hospital with dropsy and other symptoms of diseased kidneys. There were also symptoms of congestion of the lungs and enlarged heart; and a regurgitant murmur was heard at the root of the aorta. In the life history it is expressly stated that there was no double murmur; in other words, that no murmur existed synchronous with the systole of the ventricles. After death, the heart, which weighed twenty ounces, showed small fibrinous granulations upon the surface of the aortic valve-flaps.

Case IV. A patient, aged 38, died in St. George's Hospital of phthisis with vomicæ. The heart, which weighed ten ounces, was healthy, excepting the open foramen. In the life history a careful description of the physical exploration of the chest is given; but there exists no mention of any unnatural heart-sounds.

Case V. A patient, aged 32, who died of acute pleurisy and congestion of the lungs. In the life history, the physical signs, which were observed as connected with the lungs, are given; but no mention is made of any murmurs about the heart.

Case VI. A patient, aged 37, who died of abscess within the brain, connected with disease of the inner ear. After death, the lungs were found to be greatly gorged with blood. The heart, which weighed nine and a quarter ounces, presented small shreds and granulations of recent fibrine attached to the aortic valve-flaps; but otherwise, saving the patent foramen, it was natural. In the life history, it is stated that "the lungs appeared only to be affected with bronchitis."

Case VII. A patient, who died with diseased kidneys and hypertrophy of the heart. After death, the lungs were found to be very gorged with blood. The heart weighed twenty-one ounces. Its walls were thick, and its cavities dilated; and its aortic valve-flaps, which were only two in number, were rigid and unpliable. It is expressly stated in the life history that "the heart's sounds were very feeble, but nothing abnormal was found."

Case VIII. A patient, aged 32, who died of pleurisy, and was moribund when brought into the hospital. Slight scrofulous deposit was found within the lungs after death; and one lung was rendered quite useless by compression, from fluid accumulated within the pleural cavity. The heart weighed fourteen ounces, its walls being thickened.

Case IX. A person, aged 16, who died of peritonitis with bronchitis and pneumonia. The heart was natural, excepting the patent foramen. In the life history, the sounds of the heart are not alluded to directly or indirectly.

Case X. A patient, aged 38, was poisoned by prussic acid, and brought into the hospital dead. Excepting the open foramen, the heart was found to be natural.

Case XI. A patient, aged 60, was brought into St. George's Hospital with disease of the bones of the foot, and died of pulmonary phthisis with vomicæ. The heart was soft and flaccid; but, excepting the open foramen, was quite natural. In the life history, I find nothing whatever bearing upon the sounds of the heart.

Case XII. A patient, aged 45, who died of peritonitis and pneumonia. The heart, which weighed only five and a half ounces, was small; but, excepting the open foramen, natural. In the life history, I find nothing bearing upon the sounds of the heart.

Case XIII. A patient, aged 48, was admitted with a fistula *in ano*, and died of pulmonary phthisis. The heart, which weighed nine and a half ounces, was soft and lacerable; the walls of the right ventricle being thinner than usual. In the life history, I find nothing relating to the sounds of the heart.

Thus, in the preceding cases, thirteen in number, in which the foramen ovale was found to be but incompletely closed after death, there are seven in whose histories it is emphatically stated or to be inferred that no murmur synchronous with the systole of the ventricles, that is also synchronous with the diastole of the auricles, existed; and only one in which there

* The results of the examination for this purpose are detailed at page 68 of the 4th volume of the "Transactions of the Pathological Society".

is notice of any murmur with the diastole of the ventricles, that is, with the systole of the auricles. Consequently, excepting in this last single instance, we have the fact of six hearts in which more or less patency of the foramen ovale existed, but did not give origin to any unnatural sound whatever about the heart. In the solitary instance (Case III), in which a regurgitant or diastolic murmur (so-called) was heard, the heart was very large and soft, and recent granulations and shreds of fibrinous material, deposited from the blood, were adherent to the aortic valve flaps. It may therefore well be believed that this murmur was seated in the left ventricle, and had nothing to do with the septum of the auricles; if it had any such connection it must have been produced during the systole of the auricles, and therefore not at all similar to that in Dr. Markham's case which took place during the ventricular systole, and was supposed by him to be produced during the diastole of the auricles. As regards the last six cases, in which the closure of the foramen ovale was imperfect, I am sorry to say that the life history does not afford data from which any conclusive evidence as to the presence of cardiac bruits may be derived. It will be remembered that in all these thirteen cases the patients were adults. In none of them was there any cyanosis noticed during life, or congenital malformation of the heart or its vessels found after death. Moreover, there was no such condition of the valves or orifices of the heart as should primarily or secondarily tend in any material degree to impede the blood's exit from the auricles, and thus, as it were, throw greater pressure and stress upon the septum along with other parts of their walls, and lead to a mixture of the venous and arterial blood through the foramen ovale. There was, however, in many cases marked and extensive disease of the lungs, such as their occupation by the products of inflammation or scrofulous deposit, which, though to a less extent, would have a similar tendency as regards the right auricle.

I may be permitted here, as I have his sanction, to append a case lately brought before the notice of the Pathological Society by Dr. Ogier Ward, which I will curtail. It bears strongly upon the point I am attempting to illustrate.

The case was that of a child who died eleven days after birth, having been cyanotic and affected with dysphagia and choking on swallowing. The lungs and heart were auscultated during life, and it was noticed that the heart's sounds were natural, no bruit existing. After death, congenital communication between the trachea and œsophagus was found, with enlargement of the pulmonary artery and patency of both the ductus arteriosus and foramen ovale. The preparation is now in the museum of the College of Surgeons. This case, added to those related above, makes the seventh case in which the foramen ovale was more or less patent during life, and in which we have evidence that no bruit was thereby produced.

Having epitomised as briefly as possible all the cases connected with the subject of which I have any accurate note, I will say a few words regarding Dr. Markham's interesting observations.

In the case related by him, which I before noticed, nothing unnatural was found after death in the condition of the heart beyond a patent state of the foramen ovale allowing the blood to pass readily from the right to the left auricle, but not permitting it to pass in the opposite direction, excepting through two narrow slits. Among other remarks in connection with it, Dr. Markham suggests the very important query whether this peculiar state of the foramen was sufficient to account for the very marked and widely extended systolic murmur heard during life; so marked, indeed, that before death it was described as loud, rough, and prolonged, audible over the whole præcordial region and over the upper part and along the right border of the sternum, and in the whole of the upper half of the interscapular space. Dr. Markham supposes that in many cases of open foramen ovale under certain circumstances this state induces murmur during the systole of the heart. If this state of the foramen be accompanied by other unnatural states of the heart producing any murmur, then the murmur caused at the septum of the auricles becomes masked and hidden; and if there be no such disease in other parts of the heart, then no heart symptoms arise, and thus the heart remains unexamined during life, and consequently the aforesaid auricular murmur not detected. He says, "Is it not possible that such a murmur may have been present in many cases simply of open foramen ovale, but was not discovered during life because the disturbance to the circulation produced by the same lesion were not of themselves of a nature marked enough to excite attention." Again: "Cases where the foramen ovale must have been partially open during life, and yet where no symptoms to mark the fact had been observed are frequently met with; and assuredly in the majority of these cases it would be a complete begging the question to affirm that no murmur really existed during life. It is more correct to say that in the very great majority of cases of simple open foramen ovale, disturbances in the circulation do not occur, and therefore no examination of the heart is made during life. Practically speaking, how many cases are there on record where simple foramen ovale has been found after death, in which the observer can affirm that no murmur existed during life? I suspect very few." It is with this last question only of Dr. Markham's that I am now concerned; and though in what I have brought forward I do not say that I have shown reason for supposing that a murmur cannot, under any circumstances, be produced by the passage of blood through an open foramen ovale, yet I have, as I think, shown that there are numbers of cases under ordinary circumstances in which, although facility for the passage of blood from one auricle to another exists, yet no unnatural sound is thereby of necessity produced. This is so, judging from the cases adduced, even when considerable obstruction to the blood's passage through the lungs must in many cases have been present. It may be that with a certain degree of patency, a certain tension of the boundaries of the foramen, a certain quality of the blood as to consistence, and a determinate force with which the blood is propelled by one or other auricle; under all these conditions it may be a murmur might possibly be caused at an open foramen ovale. More extended observations than have hitherto been made on the matter are, however, yet required to establish the fact.

I will not here enter into the question of the greater probility of the blood's passing from one chamber to another through an open foramen ovale during the systole rather than during the diastole of the auricles, a point mooted by Dr. Markham, or *vice versâ;* or whether, again, as Dr. Hope and others have thought, the auricles are always full, a fact which I doubt, but which, if true, would I think seem to show that the circumstances of filling or emptying the auricle during systole or diastole, would be of no consequence in the production of a murmur in cases where the foramen is not fully closed, inasmuch as the septum and the valve would then always be on the stretch, and consequently always in the same invariable state of vibration. Nor will I enter into the question of the abstract possibility or otherwise of vibrations being produced at the margins of an open foramen ovale, or of the valve partially closing it, which might give rise to a murmur. These points and many others, such as the general anatomy and physiology of the foramen ovale, its method of closure, and the hinderances to its closure, might well here be discussed in furtherance of our entire knowledge of the subject in hand; but I have not entered upon them as they do not fall within the character and limits of the immediate question which I undertook in some degree to answer; viz., "How many cases are on record where simple open foramen ovale has been found after death, in which the observer can affirm that no murmur existed during life?"

British Medical Journal.

SATURDAY, JUNE 13TH, 1857.

THE MEDICAL REFORM BILLS.

IT was fully expected that the discussion on Mr. Headlam's Medical Bill would take place on Tuesday last. It is reported that Lord Elcho intends to withdraw his notice of motion, "That the Bill be read that day six months," and that the discussion will take place upon its merits. We are inclined to think that such will be found to be the case if it comes on to-night (Thursday), as it most probably will. We call attention to the very important deputation, consisting of delegates from nearly every College of Medicine, and from most of the Universities in the three kingdoms, which waited upon the Prime Minister, at his private residence, on Tues-

day, and spoke powerfully on behalf of Mr. Headlam's Bill and in opposition to Lord Elcho's, which, if carried, will confiscate the power with respect to medicine of most of the Colleges and Universities of Great Britain. It will also be seen that a flood of petitions has been poured into the House in favour of Mr. Headlam's measure, whilst very few have been presented in favour of the rival measure.

THE GREAT NETLEY BLUNDER.

We trust that our cotemporary, the *Medical Times and Gazette*, which appears to be so sore at what it terms our "incessant attacks upon the Army Medical Department", will admit that we had some grounds for our strictures upon the plan of the "Model Military Hospital" approved of by the Army Medical Department, and accepted by the Government. We have never said half the hard things of this building that have been said within the last week in the House of Commons, by gentlemen whom we presume even our cotemporary will admit to have knowledge upon the subject. Mr. Augustus Stafford, who made the tour of the Eastern hospitals in the late war, and who has studied the ventilation of those at home, deals in the following gentle manner with the Netley abortion:—

"*It was begun in utter defiance and ignorance of all those principles of sanitary knowledge which we had learnt by bitter experience during the last few years. Its site was chosen without any reference to medical authorities.* When the building was commenced, the attention of those who ought to have been consulted, and who had the interest of the British soldier at heart, was drawn to it, and it was found necessary *to make so many important and costly alterations, that the Government consented to expend* £110,000 *more upon it.* Even that increase, he believed, would not be sufficient to build it in the manner in which it ought to be built."

We are told, indeed, by those who wish to keep things quiet, that the highest medical authorities were consulted with respect to this hospital; but they forgot to tell us when. After the plan had been approved, with certain alterations suggested by the Army Medical Department; after the whole foundation had been traced, then, and only then, when it was too late, the medical officers of the various London hospitals were asked their opinion upon the matter. Can it be believed that such a bitter mockery as this is urged in defence of this faulty structure? If the opinions of these medical authorities were worth anything, why were they not consulted at the outset? Why is the country to pay an additional £110,000 to repair the blunders of those who originally planned it? Mr. Sidney Herbert, who knows perhaps as much about military hospitals as any layman, informs us that "the army hospitals at Chatham and Portsmouth are upon one construction, *which has been condemned.* Unfortunately, in the plan first adopted at Netley, *that identical construction was adopted.*"

So much for the deliberation with which the first "Model" Military Hospital was planned. The word "fudge" would be too mild to apply to such "deliberation". It was the deliberation of the merest routine—the *deep deliberation* of officials with large salaries, and far too old fashioned and comfortable to give themselves much trouble about a matter which affected the welfare of our future armies, and our credit in the eyes of foreign nations.

Whilst the utmost science of England, as represented by the Governmental departments, has been contented with approving plans founded on *condemned models*, Belgium and France are in possession of military hospitals of the most perfect construction. St. Mark's at Brussels, the Great Military Hospital at Bordeaux, the Lariboisière at Paris, have been in existence for years, the admiration of military surgeons—and we go on building such miserable abortions as the Victoria Hospital at Netley! We have before sufficiently explained the shortcoming of this great failure, which is to cost a quarter of a million of money. In order to obtain a fine façade, the comforts and health of the future inmates are to be sacrificed. The wards are carefully planned to look out on dull airing courts facing the north-east! they all communicate by means of a common corridor,—these errors we dwelt upon before; but we are helped by the debate to other objections. Mr. Sidney Herbert states, that it is reported that Southampton water rests upon a peat bottom, with a not very thick coating of mud, through which, in hot weather, sulphuretted hydrogen bubbles up. Be this as it may, it is certain that the Southampton estuary is very low, and is skirted by a district notorious for ague—that it is insalubrious there can be no question. Imagine, good reader, a vast expanse of mud, subjected to the heat of the sun for seven or eight hours in the day, and believe, if you can, that a hospital, situated immediately on its banks, is "well placed". Lord Palmerston "never heard that the spot was unhealthy,"—how should he? Mr. Sidney Herbert believes that the "relaxing atmosphere" of the neighbourhood may be beneficial to invalid soldiers returning from India; but this is not an hospital for the Indian army only, but for British soldiers. Why should the invalid from Canada be relaxed at Netley in order that the shattered trooper from one of the Presidencies may be accommodated with a congenial atmosphere? If a special hospital atmosphere is required for Indian troops, let them have it by all means; but do not palliate such a site as Netley on any such one-sided plea.

We must reasonably suppose that the alluvial valley of the Southampton waters was chosen on account of its economic consideration, seeing that on hygienic principles it is so indifferent; but Mr. Sidney Herbert knocks away the last leg it has to stand upon. "It is not", says the late Secretary at War, "in connexion with any existing garrison. If a man falls sick at Portsmouth, you cannot compel that man to be shaken for forty miles over a railroad, because you have built a large hospital and want to fill the beds." Of course you cannot.

We rejoice greatly that our "persistent attacks" have, through the letter of a "Tax Payer" in the *Times* of last Monday, attracted the attention of the legislature and of the leading journal to this matter. We have no fear that official supineness will be able any longer to persist in a plan so faulty as that of the Netley Hospital; and we trust, with the *Times*, that the original error will be entirely rooted out, and that a new hospital, thoroughly well considered *by competent men from the commencement*, will arise in some unexceptionable neighbourhood. Without endorsing the recommendation of the *Times*, that Chelsea Hospital shall exchange its pensioners for invalid soldiers, and become a hospital in the modern acceptation of that term, we do hope that some site in the neighbourhood of the metropolis will be fixed upon for this great national establishment; for we thoroughly agree with the *dictum* of the leading journal, that "all professional skill is enhanced by centralisation." A Military Hospital at

Chelsea (or any other suburban neighbourhood) would be a real school of military surgery, and our invalided soldiers would get the benefit of all that science could accomplish for their relief.

In conclusion, we may state that the Government has, on the motion of Sir D. Norreys, agreed to produce the correspondence which led to the amended plan. We shall accordingly, in a few days, be in the position to show our readers how it was that the Government officials came "not to do it" with respect to Victoria Hospital.

We have been charged by the *Medical Times and Gazette* with making a personal attack upon Dr. Andrew Smith; but we beg to assure our cotemporary that we have not the slightest personal feeling against that gentleman, of whom we know nothing. The BRITISH MEDICAL JOURNAL, as long as it is conducted by us, will never condescend to attack individuals. We do not believe that Dr. Andrew Smith would have been a whit more successful in his protest against the original plan of Netley Hospital, had he made it, than he was in his protest against the want of forecast on the part of the War Office with respect to medical affairs in the East. It is, however, precisely because the Medical Department is powerless that we wish to see it entirely remodelled, and made an influential working department, instead of the sham it is at present.

THE WEEK.

WE are glad to see that the Government has consented to refer the Sale of Poisons Bill to a Select Committee of the House of Lords. We have no doubt that in Committee this measure will be very much simplified and rendered workable, which it certainly is not in its present form. The Committee will, we hope, seek the evidence of chemists in large towns in order to obtain that practical knowledge of the working of the subject, which they cannot have gained from their own experience.

The Irish Medical Association held its Fourth Annual Meeting at the College of Surgeons, Dublin, under the presidency of Dr. Kingsley, of Roscrea, on Tuesday, June 2nd. From the report of the proceedings which has reached us, it appears that the members of the Association are setting themselves vigorously to work to obtain an improvement in the *status* of the medical profession. The principal topics of discussion were the system of medical relief of the poor in Ireland, and medical reform. In regard to the first of these subjects, several resolutions were passed demonstrative of a desire for reform, for which there seems to be as much need in the sister kingdom as in England. Among the resolutions was one adopting a petition to Parliament for amendment of the Irish Medical Charities Act. A motion in support of Mr. Headlam's Bill having been brought forward, a Dr. Donovan opposed it, and proposed an amendment condemnatory of the measure. After a long discussion, however, and the explanation of various misstatements made by Dr. Donovan, the amendment was withdrawn, and the resolution supporting the Bill was passed. We shall endeavour to notice the proceedings of the Association at greater length in our next.

The fifth annual festival of the Royal Medical Benevolent College, was held at the Freemasons' Tavern, on May 28th Earl Granville in the Chair. The amount of contributions and donations was nearly £2,500, exclusive of a donation of £1000 from the Devon and Exeter Medical Society. The donations included the sum of £500, presented by Mr. E. A. Brande. The much vexed question of the school fees for exhibitioners was alluded to by the Chairman. He said:—

"His being connected with the subject of education gave him, perhaps, somewhat of a right to express an opinion on one point. He saw by a report which had been forwarded to him that the price of the education, which was of the highest possible sort, was £40 per annum. It was a subject of congratulation that education of that character could be furnished for such a sum. If it could be given equally good for £30, it was well; but he trusted it would not be given for that sum if it involved any deterioration in the quality. He could not conceive of anything more calculated than such a course would be to endanger their prosperity, and involve them in no end of difficulty. He believed that the institution would be found of immense utility to those of them who had children; and, moreover, decidedly economical."

It seems to us that there has been some blundering in regard to the price of education. It was a mistake to fix the sum at £30 at all, if there was the least prospect of its being necessary to raise it to £40. Now that the necessity for an increase appears, of course opposition arises. We trust, however, that the institution will go on prospering; and that its council will keep themselves alive to the task of amending the defects which *will* from time to time appear in some parts of its working, however excellent the institution may be as a whole.

We have just received a copy of the *Eastern Counties Herald* of June 11th, containing a long account of the proceedings of a special meeting of Governors of the Hull Infirmary, held on Monday last, for the purpose of considering Dr. Horner's position in reference to the institution. Two motions were first proposed; one strongly condemnatory of the introduction into the Infirmary of a system at variance with legitimate medicine, and calling on the meeting to declare Dr. Horner's office vacant; the other proposing to accept Dr. Horner's resignation, which he had sent to the weekly board, and then withdrawn. At this stage of the proceedings, Dr. Horner (whose conduct in regard to the question whether he should continue in office seems to have been characterised by much vacillation) formally tendered his resignation, which was at once accepted. Thus satisfactorily has ended the connexion of Dr. Horner, as a homœopathic physician, with the Hull Infirmary. This result of the meeting was precisely that which alone could save the usefulness of the institution; for, as we said last week, and as was expressed by Dr. Horner's colleagues in a protest made by them, it would have been impossible for the followers of the two systems to have worked in harmony. We observe that the remarks which we made on the subject last week were quoted by one of the speakers—the Reverend Mr. Kemp—who made some very sensible observations with regard to Dr. Horner's position as a medical officer to a public institution. The governors, he said, had not met to discuss a scientific question—the truth or falsity of homœopathy—but "to take a common sense and practical view of the case, and to come to a decision which they thought was most calculated to carry out with efficiency the object for which the institution was established, and for maintaining its efficient administration. Public institutions must be managed on general principles. Individuals might follow any eccentric, original, or new principle they thought fit; but institutions were in a different position, and could not do so. The only thing that institutions like this could adopt, was that which was recognised by the medical body in the country." At the close of the proceedings, a vote of thanks was, on the motion of the Rev. Mr. Kemp, unanimously given to Dr. Horner for his past services in connection with the Infirmary.

THE LATE CHEVALIER JEAN DE CARRO, M.D.

In the town of Carlsbad, in Bohemia, where he had resided during the last thirty years, died, on March 12th, at the age of 87, the Chevalier Jean de Carro, Doctor in Medicine of the Universities of Edinburgh, Vienna, and Prague. His labours in connexion with the early diffusion of vaccination on the continent of Europe entitle his name to an honourable remembrance.

Jean de Carro was born at Geneva, in 1770, and passed the first twenty years of his life in that town, receiving his education at the College. He came to England in 1790, with the view of studying medicine, which he had chosen as his profession; and, after residing two months at St. Osyth, in Essex, for the purpose of acquiring the English language, he repaired to Edinburgh towards the end of the year, and became a pupil in the university, where he attended the lectures of Black, Gregory, and other distinguished professors who then gave celebrity to the institution. One of his fellow-students, who also lodged in the same house with him, was the venerable Dr. Richard Fowler of Salisbury, with whom Dr. De Carro kept up a correspondence to within a very recent period. On June 24th, 1793, after an examination at the house of Professor Gregory, author of the *Conspectus Medicinæ Theoreticæ*, he received his degree of Doctor of Medicine. The subject of his inaugural thesis was *Acute Hydrocephalus*.

Returning to Geneva, he remained there two months, and then proceeded to Vienna, where he studied during a year at the university. Having obtained his diploma, he married, and became attached to the British legation.

In 1799, having become acquainted with the discovery of vaccination, and being impressed with its value, he sent to England for some vaccine matter, with which he vaccinated his two sons. This is Dr. De Carro's own account; but Dr. Friedinger of Vienna, in a paper on the *Humanised and Original Lymph of Cow-Pock*, translated in the *Dublin Quarterly Journal of Medical Science* for May 1857, gives a somewhat different history. He says that, on March 20th, 1799, Dr. De Carro received some lymph, on threads in a letter, from Dr. Pearson, the friend of Jenner. A month later—on April 29th—State-Councillor Dr. Ferro, then Commissioner of Health, vaccinated his own three children with the matter sent to Dr. De Carro; and, on May 10th, one of Dr. De Carro's four children was vaccinated with matter taken from a child of Dr. Ferro: and subsequently Dr. De Carro's other children were vaccinated. These accounts slightly differ; but in both, Dr. De Carro appears as the introducer of vaccination—a merit which Dr. Friedinger fully recognises. In 1800, he sent through Lord Minto, British Envoy at Vienna (whose physician he was), vaccine matter to the Earl of Elgin, British Ambassador at Constantinople. The operation was performed with success on his lordship's infant son, and with the matter taken from the child several other persons were vaccinated. Under the encouragement and direction of Lord Elgin, Dr. W. Scott, Dr. Auban, a French physician at Constantinople, etc., vaccination made progress, but did not meet with favour among the Turks themselves; so that the matter often became exhausted, and fresh supplies had to be obtained from Dr. De Carro in Austria, and from England. Indeed, it was not until May 16th, 1827, that Dr. Auban vaccinated the children of the Sultan, and some of the ladies of the harem. He communicated the particulars to Dr. De Carro in a letter. This important event, it will be observed, occurred contemporaneously with the reforms introduced into Turkey by the late Sultan Mahmoud.

On November 7th, 1802, Dr. Scott wrote to Dr. De Carro that vaccination had commenced in Athens, and that upwards of eighty persons of all ages had submitted to the operation in that city. In the town of Salonica, a supply of vaccine matter having been furnished by Dr. De Carro to M. La Font, a French physician practising there, 1132 persons were vaccinated within the first eight months. Vaccination soon became general in Greece.

In the meantime, great sensation had been produced in Asia by the news of the introduction of vaccination into Constantinople; and Lord Elgin thus wrote to Sir A. Paget, Ambassador Extraordinary at Vienna, in January 1802:—"They write to me so often from Bassora, the East Indies, and Ceylon, for vaccine matter, that I beg you will immediately engage Dr. De Carro to send me some by all the couriers, until I desire him to desist. That which I have sent produced no effect." Jenner appears to have failed in his repeated attempts to transmit vaccine matter to India; very probably, Dr. De Carro thought, from want of precaution in keeping it fluid. In his despair, he offered a reward from his own purse of £1000. Dr. De Carro succeeded in the attempt to transmit the vaccine matter in an efficient state; but, from most honourable motives, would not accept Jenner's offer of a reward. "He would have been happy to claim it from a sovereign, or from a government; but never from a colleague." In compliance with the request of Lord Elgin, Dr. De Carro sent some fluid vaccine lymph to Bagdad. A child vaccinated there was sent, immediately after the operation, to Bassora; thence another child was sent on to Bombay; and thus vaccination was propagated through India, Ceylon, Persia, etc.; until, in March 1803, it had spread throughout our Asiatic possessions.

The mode adopted by Dr. De Carro for preserving the vaccine fluid was the following. He impregnated with it some *charpie*, which he placed between two pieces of glass, one of which had a small cavity: these were joined hermetically by mucilage, tied with packthread, and sealed with red wax: the whole was then enveloped in candle-wax, under the form of a moderate sized apple.

The priority of Dr. De Carro as the introducer of vaccination on the Continent of Europe is attested by Jenner in his *Continuations of Facts and Observations on the Variolæ Vaccinæ*, published in 1800. Drs. Ballhorn and Stromeyer, of Hanover, who were the first to follow Dr. De Carro's example, dedicated to Jenner and Dr. De Carro the first account of the results of their labours, in 1801. Friese of Breslau, and Nowack of Schmiedeberg, who received from Dr. De Carro their vaccine matter and instructions, also recognised him as "the first vaccinator on the Continent of Europe".

The valuable services of Dr. De Carro soon began to meet with grateful recognition. Jenner sent him a silver snuff-box, on which was engraved "*Edward Jenner to Jean De Carro*": he also sent a similar gift to Dr. Benjamin Waterhouse of New Cambridge, United States, whom Dr. De Carro designates as the "first vaccinator in the New World". In 1804, the success which had attended Dr. De Carro's transmission of vaccine matter to Bagdad having been made known to the East India Company, a committee of the Company voted him two hundred guineas for the purchase of a piece of plate; and, on the occasion of his second marriage, a present of two Cashmere shawls and three pieces of muslin was voted to him by the Honourable the Governor in Council at Bombay. The late Emperor Francis of Austria conferred hereditary knighthood on Dr. De Carro; the Hospodars of Wallachia and Moldavia, Alexander Morusi and Constantine Ypsilanti, many years ago, rewarded him by valuable presents; and Ludwig I, late King of Bavaria, conferred on his eldest daughter the honorary canonicate of the Royal Order of Ste. Anna—a decoration only conferred after proofs of nobility.

Dr. De Carro resided at Vienna during the greater part of the period from 1794 to 1826. In the latter year, he settled at

Carlsbad, in Bohemia, where he practised as a "spa-physician" during the remainder of his life.

In 1843, the jubilee of the fiftieth year of his doctorate was celebrated with much honour. On that occasion, the medical faculty of Prague sent a diploma of congratulation to him as "*viro, scientiâ, scriptis, æquè ac factis clarissimo; immortalis Jenneri, amico et proto-apostolo, cujus de vaccinatione merita vastus resonat orbis; medicorum Nestori, juvenili solertiâ insigni.*" In 1850, on December 19th, the order of the Golden Cross with the Crown for Civil Merit, was conferred on Dr. De Carro by the Emperor Francis Joseph. He was conducted to the place where the ceremony was performed, by all his professional colleagues; and the decoration took place in the presence of the authorities of the town, and of numerous spectators. The ceremony was followed by a large banquet, given in his honour by M. Knoll, burgomaster of Carlsbad.

In April 1851, Dr. De Carro was applied to for his aid toward the project, just then started, of erecting a statue of Jenner. He at once cordially assented. "I shall always be happy", he wrote, "to hear respecting the progress of the grand enterprise; for, though an old man, my activity knows no bounds. Dispose of me and of my good-will. Busy as I am as a spa-physician, I shall always find time for answering letters, and for doing everything in my power." In 1852, Dr. De Carro published an earnest address in support of the Jenner monument, the following extracts from which will show the zeal which then animated the aged man. "Although nobody hitherto has ever attempted to contest Jenner's immense claims to universal gratitude, many people wonder that Albion's rich children should seek beyond their three kingdoms and their vast colonies contributions to such an insignificant sum as £4000. As to us personally, we see nothing else in this appeal to all civilised nations but a noble courtesy, without any other view than that of associating foreigners in the honour of erecting a monument to their immortal compatriot. Some people also say: 'If the English apply to us to contribute to Jenner's monument, why do they not share with us the expense of the monuments which have been erected to Gutenberg, to Luther, to Gœthe and Schiller, to Haydn, Mozart, and Beethoven?' Having never been put to the test, nobody can say what the English would have done. However great and worthy of such honours all these men are, none of them has been so universally useful, and done so much undeniable good to mankind, as Jenner." This Dr. De Carro goes on to illustrate, and adds: "Quite different is Jenner's glory! His discovery presents an universal blessing, without any mixture of evil." Some persons in Austria appear to have declined subscribing, under the pretext of dissatisfaction with the British Government. In regard to this, Dr. De Carro confesses his "incapacity to understand what past, present, and future political systems may have in common with the Gloucester cows, who have been kind enough to supply us with an admirable preservative against the dreadful small-pox; or with God's mercy, who sent us the wonderful discoverer of this inestimable virtue."

In about 1800, Dr. De Carro published a treatise entitled *Observations et Experiences sur la Vaccination*, which seems to have been useful in the early diffusion of Jenner's discovery. In 1804, he wrote a *Histoire de la Vaccination en Turquie, en Grèce, et aux Indes Orientales;* a copy of which he forwarded in 1851 to the Jenner Monument Committee; and from which, through the kindness of the Secretary to the Committee, we have gathered some of the information contained in the foregoing notice. The other particulars have been principally taken from the *Almanach de Carlsbad* for 1852, which contains an autobiography of Dr. De Carro, and an account of his proceedings in reference to the Jenner monument.

Association Intelligence.

COMMITTEE OF COUNCIL.

THE Committee of Council will meet in Birmingham, on Tuesday, the 16th instant.

The principal business will be the consideration of the Report to be presented by the Council at the next Annual Meeting.

PHILIP H. WILLIAMS, M.D., *General Secretary.*

Worcester, June 1857.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

THE Annual Meeting of the BRITISH MEDICAL ASSOCIATION will be holden at Nottingham, on Tuesday, Wednesday, and Thursday, the 28th, 29th, and 30th of July next.

PHILIP H. WILLIAMS, *General Secretary.*

Worcester, June 1857.

BRANCH MEETINGS TO BE HELD.

NAME OF BRANCH.	PLACE OF MEETING.	DATE.
MIDLAND. [Annual Meeting.]	Town Library, Leicester.	Thurs., June 18th, 2 P.M.
LANCASHIRE AND CHESHIRE. [Annual Meeting.]	Council Chamber, Town Hall, Preston.	Wednesday, June 24th, 11.30 A.M.
BIRMINGHAM AND MIDLAND COUNTIES. [Annual Meeting.]	Hen & Chickens Hotel, New Street, Birmingham.	Thursday, July 9th, 3 P.M.
SHROPSHIRE. [Annual Meeting.]	Queen's Head Hotel, Oswestry.	Friday, July 10, 2 P.M.
NORTH WALES. [Annual Meeting.]	Royal Hotel, Rhyl.	Tues., July 14, 12 noon.

NOTICE OF ADDITION TO LAW VIII, TO BE PROPOSED AT THE NEXT ANNUAL MEETING.

I GIVE notice, in compliance with the request of the Committee of Council, that I shall, at the next Annual Meeting, propose that the President of the British Medical Association be, ex officio, a member of the Committee of Council.

PHILIP H. WILLIAMS, M.D. *Secretary.*

ADMISSION OF MEMBERS, AND PAYMENT OF SUBSCRIPTIONS.

THE General Secretary of the British Medical Association begs to call the attention of members to the Laws regarding the ADMISSION of MEMBERS, and the PAYMENT of their SUBSCRIPTIONS.

"*Admission of Members.* Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post-Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.

2. Payment to the Secretary of the Branch to which the member belongs.

3. Members residing in the Metropolis and vicinity can make their payments through the publisher of the BRITISH MEDICAL JOURNAL, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W. C.

PHILIP H. WILLIAMS, *General Secretary.*

Worcester, May 1857.

LIST OF MEMBERS WHO HAVE PAID THEIR SUBSCRIPTIONS FOR 1857.

The following is a list of the Members who have paid their Subscriptions for the present year, up to May 31st.

BEDFORDSHIRE.
Appleton, J. G., Esq., Luton
Barker, T. H., M.D., Bedford
Godfrey, J. J., Esq., Great Barford
Lawford, E., Esq., Leighton Buzzard
Slinn, W. S., Esq., Ampthill
Stedman, R. S., Esq., Sharnbrook
Thurnall, W., Esq., Bedford
Veasey, H., Esq., Woburn
Williams, J. F., Esq., Cranfield
Williamson, J., Esq., Wotton

BERKSHIRE.
Bellis, B., Esq., Maidenhead
Blomfield, T. A., Esq., Reading
Cowan, C., M.D., Reading
Harrmson, I., Esq., Reading
Kidgell, S. W., Esq., Pangbourne
Martin, J., Esq., Abingdon
May, G., Esq., Reading
May, G., jun., Esq., Reading
Powis, H. S., M.D., Maidenhead
Taylor, J., Esq., Wargrave
Walford, T. L., Esq., Reading
Wells, E., M.D., Reading
Woodhouse, R., M.D., Reading
Workman, J. W., Esq., Reading

BUCKINGHAMSHIRE.
Cosly, R., Esq., Aylesbury
Colbourne, R., Esq., Marlow
Collison, R., Esq., Newport Pagnell
Daniell, E., Esq., Newport Pagnell
Heygate, T. N., Esq. Hanslope
Mault, S., Esq., Fenny Stratford
Whitton, C., M.D., Stony Stratford

CAMBRIDGESHIRE.
Adams, D., Esq., Cambridge
Carver, E., Esq., Cambridge
Farrar, C., M.D., Chatteris
Hammond, J., Esq., Cambridge
Humphry, G. M., M.B., Cambridge
Jenkins, J., Esq., Bassingbourne
Jones, T. S., Esq., Ely
Newham, J., Esq., Doddington
Pinchard, B., Esq., Cottenham
Webber, W., Esq., Moulton Paddocks

CHESHIRE.
Blackshaw, J. Esq., Stockport
Blease, T., Esq., Altrincham
Brigham, W., Esq., Lymm
Broadbent, R., Esq., Altrincham
Brooke, J., Esq., Stockport
Bury, J., M.D., Chester
Carruthers, W., Esq., Halton
Cheetham, T., Esq., Stockport
Flint, R., Esq., Stockport
Gibson, A. C., Esq., Birkenhead
Godden, J., Esq., Oxton
Harrison, J., jun., Esq., Chester
Massey, T., Esq., Stockport
Pownall, J., Esq., Altrincham
Stolterfoth, S., M.D., Chester
Vale, J. T., Esq., Birkenhead
Vandrey, W. C., Esq., Bredbury
Waters, E., M.D., Chester
Wilson, H., Esq., Runcorn

CORNWALL.
King, D. H., Esq., Stratton
Lanyon, E., Esq., Camborne
Lawrence, J. H., Esq., Liskeard
Michell, G., Esq., Redruth
Montgomery, J., M.D., Penzance
Row, W., Esq., Lerrin
Ward, J., Esq., Bodmin

CUMBERLAND.
Arnison, C., Esq., Alston
Irving, W., Esq., Penrith
Lietch, D., M.D., Keswick

DERBYSHIRE.
Baker, J. W., Esq., Derby
Bent, T., M.D., Derby
Beresford, H., Esq., Chesterfield
Black, C., M.D., Chesterfield
Cope, G. A., Esq., Etwall
Evans, S. H., Esq., Derby
Fearn, S. W., Esq., Derby
Gisborne, H. F., Esq., Derby
Goode, H., M.B., Derby
Gregory, J., Esq., Youlgrave
Heygate, J., M.D., Derby
Hollis, W., Esq., Alvaston
Howard, W. W., Esq., Glossop
Johnson, W., Esq., Derby
Jones, J., Esq., Derby
Pearson, J. A., Esq., Buxton
Skivington, J., Esq., Ashbourne
Walker, C., Esq., Wirksworth

DEVONSHIRE.
Baker, A., M.D., Dawlish
Bignell, J. B., M.D., Barnstaple
Brooking, C. H., Esq., Brixham
Cartwright, W. A., Esq., Teignmouth
Chilcote, W. E., Esq., Broadhempston
Collyns, W., Esq., Alphington
Cookworthy, J. C., M.D., Plymouth
Elliot, J., Esq., Kingsbridge
Gaye, C., Esq., Newton Abbot
Haley, P. F., Esq., Witheridge
Harper, T., Esq., Plymouth
Hartley, E., Esq., Ivybridge
Jerrard, J. C., Esq., Honiton
Kilgour, J. S., M.D., Exmouth
Leslie, A., Esq., Newton Bushel
Miller, P., M.D., Exeter
Swain, P. W., Esq., Devonport
Tetley, J., M.D., Torquay
Thompson, J., Esq., Bideford
Toogood, J. B., Esq., Torquay
Walker, D. G., Esq., Budleigh Salterton

DORSETSHIRE.
Clapcott, J. J., Esq., Evershot
Cory, S. S., Esq., Bridport
Emson, A., Esq., Dorchester
Good, J., Esq., Dorchester
Griffin, R., Esq., Weymouth
Highmore, N., Esq., Sherborne
Nott, T., Esq., Bere Regis
West, J. W., Esq., Poole

DURHAM.
Atkinson, J., Esq., West Hartlepool
Brown, J., M.D., Sunderland
Clarke, Hugh, M.D., Ferry Hill
Jackson, T. H., M.D., Darlington
Keenlyside, R. H., M.D., Stockton-on-Tees
Longbotham, J., Esq., Greatham
Mackie, James, Esq., Heighington
Richardson, W., Esq., Stockton-on-Tees
Scott, William, Esq., Thorneley
Strother, Arthur, Esq., Darlington
Trotter, C., Esq., Stockton-on-Tees

ESSEX.
Allison, W. J., Esq., Great Ilford
Cary, W. H., Esq., Woodford
Clegg, Joseph, Esq., Epping
Elliot, W., M.D., Stratford
Hare, H., Esq., Great Baddow
Havens, P., Esq., jun., Wivenhoe
Hodges, R., M.D., Rochford
McNab, Daniel, Esq., Epping
Manthorp, M. L., Esq., Thorpe Abbey, Colchester
Nicholson, J. F., Esq., Stratford Green
Sinclair, D., Esq., Halstead
Smith, J. F., Esq., Dunmow
Smith, J. H., Esq., Manningtree
Waylen, W., Esq., Colchester
Welsh, F. F., Esq., Saffron Walden

GLOUCESTERSHIRE.
Anderson, Frank, Esq., Bristol
Bleeck, Alfred, Esq., Bristol
Brittan, F., M.D., Clifton
Brown, C. F., Esq., Clifton
Burder, G. F., M.D., Clifton
Burroughs, J. B., Esq., Clifton
Clark, Henry, Esq., Bristol
Clarke, W. M., Esq., Clifton
Corbould, G. G., Esq., Bristol
Crisp, Nathaniel, Esq., Bristol
Cross, William, Esq., Clifton
Dalton, William, Esq., Cheltenham
Davey, J. G., M.D., Northwoods
Ellis, R. W., Esq., Bristol
Eves, A., M.D., Cheltenham
Gabb, A. W., Esq., Cheltenham
Godfrey, James, Esq., Bristol
Green, Thomas, Esq., Bristol
Greig, C., Esq., Clifton
Harrison, John, Esq., Bristol
Herapath, W. B., M.D., Bristol
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Jones, T. C., Esq., Pembroke
Leigh, J., Esq., Pont-y-pridd
Lyde, J. W. P., Esq., Hay
Nicol, D., M.D., Swansea
Prichard, H. L., Esq., Talbach
Thomas, J., Esq., Llaneigwad
Vachell, C., M.D., Cardiff

SCOTLAND.

Adamson, J., M.D., St. Andrew's
Archibald, D., M.D., St. Andrew's
Bell, R., M.D., Dundee
Carlyle, W. J., M.D., Langholm
Carmichael, D., M.D., Buckie
Christison, R., M.D., Edinburgh
Coldstream, J., M.D., Edinburgh
Craig, J., Esq., Ratho
Day, G. E., M.D., St. Andrew's
Gairdner, W. T., M.D., Edinburgh
Gibson, W. L., M.D., Dundee
Graham, C. W., M.D., Dalkeith
Laing, G., Esq., Ferryport-on-Craig
Lawrence, G., M.D., Crail
Laycock, T., M.D., Edinburgh
Low, A., Esq., Ferryport-on-Craig
Lyell, J., M.D., Newburgh
Macarthur, A., M.D., Anstruther
Manson, A. J., Esq., Inverkeithney
Munro, W., M.D., Dundee
Spence, W., M.D., Letham
Taplin, T., Esq., Edinburgh
Thomson, G. W., M.D., Hawick
Thomson, T., M.D., Inverury
Troup, F., Esq., Auchtermuchty
Weir, W., M.D., Glasgow
Wiseman, R., Esq., Cupar

FOREIGN COUNTRIES.

Fletcher, J. W., Esq., Calcutta
Lund, G., M.D., Madeira
Nicholson, T., M.D., Antigua

EAST YORK AND NORTH LINCOLN BRANCH: ANNUAL MEETING.

THE first General Meeting of the East York and North Lincoln Branch was held in the Library of the Hull Infirmary, on Tuesday, May 26th; HUMPHRY SANDWITH, M.D., of Hull, in the chair. There were also present: John Bell, Esq. (Grimsby); John P. Bell, M.D. (Hull); Sir Henry Cooper, M.D. (Hull); R. M. Craven, jun., Esq. (Hull); Owen Daly, M.B. (Hull); W. H. Eddie, Esq. (Barton-on-Humber); R. Hardy, Esq. (Hull); J. F. Holden, Esq. (Hull); Kelburne King, M.D. (Hull); J. A. Locking, Esq. (Hull); W. J. Lunn, M.D. (Hull); J. Morley, Esq. (Barton-on-Humber). As visitors, there were present: Dr. Gallagher, R.N., H.M.S. *Cornwallis;* Messrs. Carnley, Dix, and R. L. Sleight.

NEW MEMBERS OF THE BRANCH.

F. B. Anderson, Esq. (Hessle); W. H. Eddie, Esq. (Barton); and J. Morley, Esq. (Barton), were elected members of the Branch.

OFFICERS AND COUNCIL.

The following gentlemen were elected as officers of the Branch:—*President:* Humphry Sandwith, M.D. (Hull). *President-Elect:* John Bell, Esq. (Grimsby). *Representative to the General Council:* Sir H. Cooper, M.D. (Hull). *Secretary:* J. A. Locking, Esq. (Hull). *Committee:* J. P. Bell, M.D.; R. M. Craven, jun., Esq.; O. Daly, M.B.; R. Hardy, Esq.; K. King, M.D.; W. J. Lunn, M.D. (Hull); W. H. Eddie, Esq. (Barton).

MEDICAL REFORM.

A letter from Dr. Henry, Secretary to the Medical Reform Committee of the British Medical Association, and the leading article in the JOURNAL of May 23rd respecting the Medical Reform Bills, having been read, it was resolved, after discussion—

"That the Bill brought forward by Mr. Headlam be adopted, and a petition in its favour be presented to the House of Commons."

NECROSIS OCCURRING IN THE NEIGHBOURHOOD OF IMPORTANT PARTS. BY KELBURNE KING, M.D.

[This paper will be published in the JOURNAL.]

Mr. MORLEY stated that the patient, who was supposed to have been salivated, had been under his care. The man had been poisoned, whilst sheep-washing, by arsenic received through a wound in the skin. He had severe enteritis, being laid up for four months; and had not recovered from the effects of the arsenic when Mr. Morley lost sight of him.

Mr. R. M. CRAVEN mentioned the case of a boy where three-fourths of the tibia had been removed. The bone had been reproduced, so that he could now bear weight upon it.

Mr. BELL (Grimsby), many years ago, saw a case in the Hull Infirmary where the humerus had been reproduced.

CASE OF HEART-DISEASE, IN WHICH A LOUD BELLOWS-MURMUR WAS PRESENT. BY OWEN DALY, M.B.

The murmur was louder and more marked with the systole. The patient was subject to periodical attacks of palpitation, and, after a more than usually severe one, was seized with hemiplegia of the whole of the right side. Sensation remained intact. Four months from the date of the attack of hemiplegia, the patient's heart was again examined, when not the slightest symptom of valvular or other affection of the heart could, after the most careful search, be discovered. The patient died suddenly: there was no *post mortem* examination.

Dr. DALY was of opinion that the case belonged to the same category as those related by Dr. Kirkes in the *Medico-Chirurgical Transactions*, in which the middle cerebral artery was found plugged with a piece of fibrine torn from the valvular interior of the heart.

The next meeting was appointed to be held at Grimsby, in September; and the proceedings of the day were terminated by the members dining together at the Vittoria Hotel, under the presidency of Dr. Sandwith.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE Annual Meeting of the Yorkshire Branch was held at the Cutlers' Hall, Sheffield, on Thursday, June 4th; GABRIEL REEDAL, Esq., President, in the Chair. There were also present: James Allen, Esq. (York); F. Branson, M.D (Baslow); C. Chadwick, M.D. (Leeds); J. P. Garlick, Esq. (Leeds); J. C. Hall, M.D. (Sheffield); J. Haxworth, Esq. (Sheffield); W. Hey, Esq. (Leeds); H. Jackson, Esq. (Sheffield); W. Jackson, Esq. (Sheffield); T. Simpson, M.D. (York); H. Y. Whytehead, M.D. (Crayke); H. Williamson, Esq. (Rotherham): also H. G. Allanson, Esq.; S. Arden, Esq.; J. H. Aveling, M.B.; M. De Bartolomé, M.D.; W. F. Favell, Esq.; John Hall, Esq.; G. C. B. Hart, Esq.; J. Nicholson, Esq.; R. Roper, Esq.; W. Skinner, Esq.; R. M. Smith, Esq.; W. W. Tinsley, Esq.; H. J. Walker, Esq. (of Sheffield); R. Harmar, M.D. (Ecclesfield); R. Cooper, Esq. (4th Dragoon Guards); Dr. Stewart (98th Regiment); Dr. Sparrow (98th Regiment).

REPORT OF COUNCIL.

In meeting their fellow-members of the Yorkshire Branch of the British Medical Association, at this their annual meeting, your Council will, in accordance with established custom, proceed to pass in review those subjects connected with the best interests of the profession which, in their opinion, deserve the attention and require the consideration of those present. The Branches now exercise an important influence over the working of the Parent Association; and each Branch is expected to give some indication of the opinions of those practitioners of our art who live within its sphere.

Medical reform at present engages the attention of every one interested in the welfare of the profession. Two Bills are now before Parliament; one introduced by Mr. Headlam, with the sanction and co-operation of our own Association, and most of the medical corporations of Great Britain and Ireland; the other introduced by Lord Elcho, to secure the interests of certain Scotch universities.

Mr. Headlam proposes a Council to a certain extent representative, while Lord Elcho is prepared to vest the entire control of the medical profession in the hands of the government of the day, through a Council entirely consisting of nominees of the Crown. Your Council need scarcely remind you that the President of the Board of Health (the proposed head of such Council) may be a homœopathist or hydropathist, and that he may preside; and empirics may sit at a Board where the interests of legitimate medicine ought alone to be represented.

Mr. Headlam provides that each practitioner of medicine and surgery shall obtain a degree from his respective College, while Lord Elcho only provides for one general degree for medicine and surgery.

The provisions of the two Bills are no doubt familiar to all present; and your Council recommend that a petition in favour of Mr. Headlam's Bill should be presented to Parliament from this Branch.

The Army Medical Department, through the late disasters in the Crimea, has engaged much general and professional attention; and a Commission has been appointed to investigate the working of the department, and to report on the evils of the present system and their remedies. Your Council trust that the evils of which army surgeons have so long had reason to complain will now be remedied, and that medical science will in future direct the sanitary arrangements of camps and barracks.

Mr. Griffin continues his indefatigable labours on behalf of his brethren, the Poor-law surgeons; and your Council hope that, ere long, that ill used body of men will obtain a more adequate remuneration for their labours.

Your Council hope that, when the subject of medical reform shall, by the settlement of the question, no longer demand the attention of the Branch, some means may be devised by which a greater scientific value may be imparted to these meetings, as a free interchange of opinion on many of the difficult problems of medicine and surgery, between the members of this Branch, must lead to a further development of that science whose advancement is so largely bound up with the best interests of man.

Your Council regret that our late excellent Secretary, Mr.

Matterson, was compelled by the state of his health to resign his office in January last, and beg to recommend Mr. Hornby of York to the meeting as his successor.

Dr. WHYTEHEAD moved, Dr. SIMPSON seconded, and it was resolved—

"That the report now read be adopted."

BRANCH COUNCIL FOR 1857-8.

Mr. ALLEN moved, Mr. H. JACKSON seconded, and it was resolved—

"That the following gentlemen form the Council of the Branch for the year 1857-8:—J. Allen, Esq.; B. Dodsworth, Esq.; R. Hey, Esq.; W. D. Husband, Esq.; G. Shann, M.D.; T. Simpson, M.D.; W. E. Swaine, M.D.; Caleb Williams, M.D. (York); J. Ness, Esq. (Helmsley); C. Chadwick, M.D.; J. P. Garlick, Esq.; W. Hey, Esq.; T. Nunneley, Esq.; S. Smith, Esq.; J. P. Teale, Esq. (Leeds); F. Branson, M.D.; H. Jackson, Esq.; W. Jackson, Esq.; G. Reedal, Esq. (Sheffield); T. Sandwith, M.D, (Beverley; H. Whytehead, M.D. (Crayke)."

REPRESENTATIVES IN THE GENERAL COUNCIL.

Mr. H. JACKSON proposed, Dr. BRANSON seconded, and it was resolved—

"That the following members be nominated to represent the Yorkshire Branch in the General Council for the ensuing year:—W. D. Husband, Esq.; Caleb Williams, M.D. (York); C. Chadwick, M.D.; J. P. Garlick, Esq.; W. Hey, Esq.; Thos. Nunneley, Esq. (Leeds); G. Reedal, Esq.; Wm. Jackson, Esq. (Sheffield)."

PLACE OF MEETING FOR NEXT YEAR.

Mr. ALLEN proposed, Mr. H. JACKSON seconded, and it was resolved—

"That the next place of meeting be Leeds; and that J. P. Garlick, Esq., be the President-Elect."

VOTES OF THANKS.

Dr. SIMPSON proposed, Mr. H. JACKSON seconded, and it was unanimously resolved—

"That the best thanks of this meeting be given to J. Allen, Esq., the late President, for his services during the past year."

Dr. BRANSON proposed, Mr. GARLICK seconded, and it was unanimously resolved—

"That the best thanks of this meeting be given to our late excellent Secretary, Mr. Matterson, of York, for his unremitting services to the Branch; and that Mr. Hornby, of York, be appointed Secretary of the Branch."

Dr. J. C. HALL moved, Dr. WHYTEHEAD seconded, and it was unanimously resolved—

"That the best thanks of this meeting be given to W. D. Husband, Esq., for his kind and valuable services as Secretary *pro tempore*."

MEDICAL REFORM.

Dr. J. C. HALL moved, Mr. ALLEN seconded, and it was resolved—

"That a petition be prepared by the President and Council in Sheffield, praying the House of Commons to adopt Mr. Headlam's Medical Reform Bill, and to reject that of Lord Elcho; that it be signed by the President on behalf of this Branch; and that Mr. Headlam be requested to present it."

Dr. CHADWICK moved, Dr. J. C. HALL seconded, and it was resolved—

"That the President be requested to address the Reform Committee of the Association, expressing surprise that the latter part of Clause 24 of Mr. Headlam's Bill should have escaped their notice, and recommending that they should take steps to have it expunged."

MEDICAL DEPARTMENT OF THE ARMY.

Mr. H. JACKSON proposed, Mr. HEY seconded, and it was resolved—

"That the intention of the Committee of the House of Commons, on the subject of Reform in the Medical Department of the Army, over which Mr. Stafford presided last year, having failed in its object, we are rejoiced to find that a Royal Commission has been appointed to inquire into the evils so justly complained of by our military medical brethren; and we most earnestly request the central Council of the British Medical Association to direct their attention to the subject of the claims of the Medical Department of the Army, and to support them to the utmost of their power, by memorial or otherwise to the Commission now sitting on the Medical Department of the Army."

The following papers were ordered to be transmitted to the Central Council:—

1. Copies of Correspondence; 2. Suggestions; 3. Copy of Letter to President of Provincial Medical and Surgical Association, 1855; 4. Abstract of Evidence; 5. Necessity of Perfecting our Military System.

CASES AND COMMUNICATIONS.

Mr. WILKINSON, of Rotherham, read a paper on the Advantages of Blood-letting.

Mr. H. JACKSON gave an abstract of three cases of Irritable Ulcer of the Anus, cured by Incision, by Mr. Tinsley; and also an abstract of a case of Popliteal Aneurism treated successfully by Compression, by himself, in the Sheffield General Infirmary.

Thanks were voted to the authors of the papers.

The members and their friends afterwards dined together at the Royal Hotel, under the presidency of G. Reedal, Esq.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 11TH, 1857.

SIR C. LOCOCK, Bart., M.D., President, in the Chair.

ANALYSIS OF FIFTY-TWO CASES OF EPILEPSY.
BY EDWARD H. SIEVEKING, M.D., F.R.C.P.

THE 52 cases analysed had occurred exclusively under the author's own observation, and the conclusions were limited to points with reference to which satisfactory evidence could be obtained.

Sex. 2, or 46·15 per cent., were females; 28, or 53·84 per cent, were males.

Age. The following was the distribution of the cases throughout the different periods of life:—Under 10 years, 17; from 10 to 20, 19; 20 to 30, 4; 30 to 40, 4; 40 to 50, 7; over 50, 1; or from infancy to the age of 20 years inclusive, 69·23 per cent.; from 21 to 40 years inclusive, 15·38 per cent.; from 41 to 55 years inclusive, 15·38 per cent. Arranged according to sex, there were found during the first decennium, 8 males and 9 females; during the second, 12 males and 7 females; during the third, 2 males and 2 females; during the fourth, the same number of each; during the fifth, 2 males and 3 females; during the sixth, 1 female. The male sex during puberty, therefore seemed to exhibit a more marked proclivity to epilepsy than the female; at later periods the ratio returned to the equality shown to prevail during the first ten years of life.

Causes. Hereditary tendency could be traced only in 6 cases, or 11·1 per cent. A definite cause was assigned by the patient or the patient's friends in 16 cases, or nearly one-third of the whole. Amongst these, otorrhœa was mentioned twice; fright, twice; injury to the head, twice. The causes differed in the relation they bear to the occurrence of the seizure.

Premonitory Symptoms. An "aura" (comprising under this term all the premonitory symptoms indicating the approach of a fit) was noted in 27 out of 52 cases. The most common was a sense of giddiness and impairment of vision; sometimes the patient suffered pain in a definite region of the body, or, though unable to explain the sensation, is aware of some change from which they knew that a paroxysm was about to take place. The sensation was never described as a puff of wind or aura in its verbal sense.

Individual Symptoms. Headache was observed in 33 out of 52 cases, or 63·42 per cent. The mode of its occurrence varied; the patient either suffered habitually or very frequently from it, and the symptom bore no immediate relation to the paroxysm; or the headache occurred shortly before the fits, so as to usher them in; or again it affected the individual after they were over. It was constant or frequent in 36·5 per cent.; it occurred before the fits only in 7·7 per cent.; it occurred after the fits only in 17·3 per cent. The tongue was bitten in 17 cases, or 32·7 per cent. The urine was tested for albumen in 19 cases, and it was found temporarily present in one, permanently in another. It was also tested for sugar in 14 cases, and this ingredient was not found once—a result which seems irreconcilable with the observations of Dr. Goolden.

Results of Treatment. The author expressed a feeling of scepticism with regard to the positive certainty of any cure of epilepsy. He believed that, in the majority, no organic lesion, in the ordinary anatomical sense of the word, was present in the commencement of the disease, and that, in a large number, none seemed to result from the recurrence of the fits. It appeared that a diathesis was necessary to its occurrence, and that

this might be suppressed or held in check; but whether it might be eradicated, was a question which he would not venture to answer in the affirmative. He was satisfied of the power of well selected remedies in repressing, and often indefinitely postponing, the paroxysm; and he particularly insisted on the importance of dietetic and regiminal treatment. The number of apparent cures was 15, or 28·85 per cent.; in other instances, more or less benefit was obtained. The duration of the disease before the commencement of treatment had an obvious influence over its curability. Eight of the 15 (apparent) cures were wrought in cases that had lasted one year or under, four were of two years duration, one of three, one of six, and one of eight years. The treatment adopted had varied with the nature of the constitutional affection in each case; but the main indications were to remove local irritation by counterirritants, to promote the healthy action of the secernent organs, and to give a tone to the constitution by vegetable and metallic roborants. The author expressed his belief that there was no specific for epilepsy; the salts of zinc certainly failed to remove it in many cases.

In a postscript he detailed the results of an analysis of the Returns of the Registrar-General with reference to sex in deaths from epilepsy during seven years; which gave 6729 males, and 6149 females, or 52·26 per cent. of the one sex to 47·73 of the other.

TREATMENT OF WOUNDS OF THE PALMAR ARCHES BY FORCED FLEXION OF THE ARM. BY J. GILES, ESQ., M.R.C.S.

[*Communicated by* T. B. Curling, Esq., F.R.S.]

After allusion to the various troublesome complications, and frequent very serious consequences which attend wounds of the palm, when circumstances prevent the application of ligatures at the seat of injury, the author remarked upon the advantages of a method of treatment which should have the advantage of checking the hæmorrhage without either severe local pressure or ligature of vessels remote from the wound; such advantages would seem to be afforded by the plan of flexing the forearm upon the arm with sufficient force to arrest the bleeding, and maintaining it in that position so long as may be necessary. The author related five cases of wound of the palmar arch, and one of wound of the forearm, which were thus treated, and all with success, save one, in which, however, the procedure was not had recourse to until a month after the accident. The merit of originating the mode of treatment was given to M. Durwell, by whom it was proposed in *L'Union Médicale*, tome iii, p. 341.

ANTEFLEXION OF THE UTERUS CONSIDERED AS A NORMAL ANATOMICAL CONDITION. BY J. H. BENNET, M.D.

The author's attention was attracted some years ago, during a series of investigations into the condition of the os internum during life, by the anatomical fact that the uterine cavities and the uterus itself, in women who have never borne children, are generally more or less anteflexed. He thinks it proved that this was misunderstood because stem pessaries are invariably made perfectly straight, and anteflexion has been universally described as an abnormal or morbid condition. M. Huguier, however, published a memoir some years ago, describing anteflexion as an occasional congenital condition, but he described it as accidental and exceptional. The author's researches were begun with a view to determining the value of contraction of the os internum as a cause of sterility. He found that when the uterine sound met with resistance there, a small wax bougie could be passed, which, if allowed to remain for a minute or two in the uterus of a woman who had borne no children, presented when withdrawn a slight anterior curve. The same effect continues in some degree after one or more parturitions. This state can scarcely be recognised by digital examination under ordinary circumstances, but is readily perceived when decided, and may become very great in exceptional bases. The author then adverted to the observations of M. Boullard on this subject, who describes anteflexion as the natural anatomical direction of the uterus. He finds it most marked in the fœtus, less so in the child, and least in the adult; and that it ceases to be perceptible in most women who have borne children. The author thought that M. Boullard had rather exaggerated the degree of curvature. He next pointed out the pathological bearing of anteflexion, believing that it might be treated as a morbid state, especially if the uterus be enlarged by chronic inflammation, which would render the curvature more marked. He thought attempts to straighten the uterus likely to be injurious, and that no treatment ought to be employed except what might be necessary to relieve the congestion of the organ. He did not think it had any definite relation to irregular menstruation, but when both conditions were coincident the general health was much below par, and the anteflexion was commonly very decided.

Mr. J. Wood thought the cases referred to depended upon the degree of fulness or emptiness of the bladder and rectum. He had seen the peculiarity in question in the *fœtus in utero*, and in very young persons, and at such periods there appeared to be less curvature than in after life. He did not consider the curve a permanent one, but one which depended upon the varying conditions of the pelvic regions.

MEDICAL SOCIETY OF LONDON.

Saturday, April 25th, 1857.

Francis Hird, Esq., President, in the Chair.

THE NECROSIS OF CANCER, AND ITS CONSEQUENT ENUCLEATION. BY J. M. MOULLIN, ESQ.

The author gave the history of six cases of cancer of the breast, and showed several specimens which had been enucleated by the action of the chloride of zinc. These specimens were proof of the result of a mode of proceeding which, as far as he could ascertain, was entirely new. The object proposed was not to destroy tumours piecemeal, making layer after layer slough and separate by successive applications, which are each brought into contact with an extremely irritated surface; but rather to induce the slow death of the morbid growth by causing its substance to become day by day penetrated more and more deeply by an agent which coagulates the blood in its vessels, and acts in like manner upon the living albuminous solid; and finally, when completely necrosed, to become enucleated *en masse*. The principle was, to proportion the rate of our therapeutic efforts to that of the disease dealt with. The morbid action that would be exasperated by violent measures, yielded kindly to a mild influence steadily maintained. Such, the author believed, was the *rationale* of the treatment which he fully described in the history of the cases. Mr. Moullin stated that the essential point in his plan of proceeding was the mode in which the remedy was used; and it was quite possible that other remedies used in the same way might produce like effect. The history of the cases furnished a good illustration of the disease in its various stages. One of the cases, of one year's duration, was in its first and by far the most favourable stage for either plan of treatment, being about the size of a nut, perfectly moveable, and rarely causing much pain. The disease, the author thought, at this stage might, with all propriety, be denominated local. Another case, of twelve years standing, was a very good example of the disease in its second stage; the tumour was of the size of an ordinary orange, of stony hardness, well defined, yet moveable; the pain was more of a lancinating character, as if a needle were run in. Next came two cases, the one of two, the other of twelve years growth, where the tumour was attached to the integuments, having the peculiar appearance previous to the commencement of ulceration, and forming the third stage. In two other cases, one of twenty, the other of three years duration, ulceration had taken place, presenting an open, excavated sore, with hardened, everted, irregular edges, uneven base, covered with a grey slough, offensive thin discharge, frequent losses of blood, and all the usual train of constitutional symptoms. It was in such cases that the plan of treatment proposed would be found most advantageous. The object of this plan of treatment was not merely to destroy diseased parts, but to modify the abnormal vitality of the subjacent tissues, without which the disease would reappear. The effect of the chloride of zinc in cancerous cases had long been known to the profession; and it had been largely used on the continent with marked success, and in this country by Mr. Ure. The extirpation of cancer by the necrosing agent never created any serious inconvenience; while an amputation of the breast might not always have the most favourable issue. The chloride of zinc was most useful in open or ulcerated cancers and cancroid growths generally, where the knife was utterly out of the question; also, in the enucleation of tumours of a doubtful nature; and in secondary cancerous formations following operations with the knife. In the treatment of rodent ulcer, the *noli me tangere* of some authors, the author stated that two important questions presented themselves for the consideration of the professsion. The first was the possibility of the enucleation of tumours, malignant or benign, by the action of chloride of zinc. This first point, he thought, was satisfactorily proved, by placing facts before his professional brethren,

and he would leave it to them to declare whether they were satisfied with the result. As to the second point—viz., the liability and probability of a return of disease after enucleation of the tumour—this nothing but time and experience could decide.

Dr. MACKENZIE remarked, that the paper could not decide the respective value of the local treatment of cancer by enucleation or the knife, inasmuch as the cases related were too recent on which to form any opinion. It was still a question how far the removal of the local disease did away with the chances of return. Cases had constantly occurred in which the removal of the local disease was followed by internal cancerous affections, and had destroyed the patients.

Mr. BARWELL said that it was questionable whether any local treatment would so modify the constitutional taint as to prevent a recurrence of the disease. He was surprised that there had been so little pain in Mr. Moullin's cases. In 1824, M. Cancoin had used the arsenical paste in some cases with a fatal result. He then experimented with seventeen different kinds of escharotics, and he found that of these nitric acid was the least painful in its application, whilst chloride of zinc was the fourteenth on the list. He (Mr. Barwell) had used the tannic acid in some cases of cancer. To be of service, it was necessary that there should be much care in its application. Slits must be made in the slough to enable the tannic acid to permeate through it. Applied in this way, it was productive of little pain.

Mr. JABEZ HOGG did not feel satisfied with the evidence produced by the author as to the character of the tumours which had been enucleated by him. In the absence of a microscopic examination, the diagnosis must necessarily be imperfect. Numbers of cases were called cancer, treated as such, and said to be cured, which were in reality benign tumours.

Mr. BIRKETT had been quite disappointed in the paper, which contained nothing new. Escharotics had been extensively employed, to prevent the natural alarm which patients had on the use of the knife. With respect to true cancer, no case had been recorded as successful after removal which was not eventually followed by death from secondary deposits in some other organs. It was said in favour of escharotics, that they had so much influence on the surrounding tissues as to prevent the recurrence of the disease; but this was a mere assertion, and had not a tittle of proof to rest upon. The question at issue was clearly "caustic *versus* knife"; and he contended, in opposition to the statement of the employers of caustic, that the knife was not uncertain, but that the local disease could be more safely and readily extirpated by it than by caustic. He had tried the caustic; it had been also extensively used by Key, Callaway, and Brodie. Mr. Key had tried it in fifteen or twenty cases. All the cases had terminated with exactly the same results as if the knife had been used. M. Cancoin had operated in four cases in this country, and he (Mr. Birkett) was in a condition to state the ultimate results of these proceedings. The first case was that of a lady, thirty years of age, who had been operated upon three times by Sir Benjamin Brodie, and twice or thrice by Mr. Turner, of Manchester. The case was afterwards treated by M. Cancoin, and did not recur. But it was well known that this was not a case of cancer at all, but was simply one of adenocele. It was reported, however, at the time as a case of cancer, and vaunted as a cure of that disease. The other three cases terminated fatally, just as though the ordinary operation by the knife had been performed. The cases recorded by M. Cancoin in his work might be divided into four distinct classes:—1, cases of chronic abscess; 2, cases of ordinary adenocele; 3, cases of irritable mamma. These, of course, all did well. The 4th were cases of true cancer, all of which had an unsatisfactory termination. He (Mr. Birkett) contended that the use of the caustic had no advantage whatever over that of the knife; and he called upon the author of the paper to state explicitly what was the real influence which the caustic exerted over the tissues surrounding the primary growth, so as to prevent a recurrence of the disease?

Dr. ROGERS had seen a case which had been operated upon in the Middlesex Hospital by Dr. Fell. The patient had died, after three weeks of agonising torture, from carcinomatous disease of the chest, and effusion. He had seen a similar case of cancer of the os uteri, but with the same results, under the care of Dr. Pattison. This patient had died after the most intense agony, consequent upon the application of the caustic.

Mr. WEEDEN COOKE believed that the author's plan of slicing and cauterising a cancerous breast was identical with that pursued by Dr. Fell. It was a most painful and severe operation, protracted for thirty or forty days; and, after all this suffering, did no more than the knife could do in a few minutes, without any pain at all, with the aid of chloroform. The plan pursued by Mr. Stanley, at St. Bartholomew's Hospital, was a much more humane and equally efficacious proceeding; but, in Mr. Cooke's opinion, excision by the knife, if an operation was necessary at all, was the only proceeding that ought to be sanctioned by the profession. Mr. Cooke, however, considered that operations, whether by caustic or the scalpel, were undesirable; that the disease was not eradicated by them, but that the dyscrasia which accompanied the disease was thereby increased, and life shortened. On the other hand, by supporting diet and tonic treatment, the constitution was enabled to resist the progress of the disease, and bring about that resolution by atrophy of the tumour which was observed in so many cases at the Cancer Hospital. Mr. Cooke thought that the whole profession would eventually protest against this revival of a treatment, painful in the extreme, and having no single advantage over the usual mode of excision by the knife.

Mr. HANCOCK did not see the advantage of Mr. Moullin's application over the use of the knife; in one case related by that gentleman, in which one of the glands of the axilla was enlarged, most surgeons would have either removed the gland, or have refrained from any operative procedure whatever.

Mr. MOULLIN, in reply, admitted that no microscopic examination had been made in either of his cases; but his opinion that they were cases of cancer, had been fortified by that of others, well able to judge of the nature of the disease, and who had sent them to him as cases unfit to remove with the knife. He did not assert that these cases were cured, nor could he fairly do so, as his experiments had only commenced in December last. He had merely brought them forward as instances of the enucleation of the local disease by caustic. So far he thought they were entitled to the notice of the society. He should watch these cases carefully, and report upon their progress at some future opportunity. He had other cases under treatment, respecting which he should lay the particulars before the profession. With respect to pain, in only one case was it remarkable, and in this the agony was beyond description; but in this instance the nitric acid had not been employed.

ROYAL SOCIETY.

LORD WROTTESLEY, President, in the Chair.

INQUIRIES INTO THE QUANTITY OF AIR INSPIRED AT EACH FIVE MINUTES, ONE QUARTER, AND HALF-HOUR OF THE DAY AND NIGHT, AND UNDER THE INFLUENCE OF VARIOUS KINDS OF EXERCISE, FOOD, AND MEDICINE, TEMPERATURE, ETC.

BY EDWARD SMITH, M.D., LL.B.

THE communication consisted of three parts, and comprised the results of 1,200 series of observations. The first part contained the results of three investigations as to the quantity of air breathed during the whole of the twenty-four hours, and registered every fifteen and thirty minutes. The second part described the influence of posture, riding on horseback, travelling by omnibus and railway, rowing, swimming, walking, carrying of weights, the labour of the treadwheel, ascending and descending steps—also of sunlight and darkness, artificial heat, various diets, etc. The third part was devoted to certain inquiries in relation to the temperature of the body. There were not any records of inquiries similar to those contained in the first part of this paper, and extremely few in reference to any portion of the second. The aim of previous observers had been to determine the chemical effects of respiration.

The author was himself the subject of all the investigations. He is thirty-eight years of age, six feet in height, healthy and strong, and with a vital capacity of the lungs of 280 cubic inches. The instrument employed was Glover's patent dry gas meter of improved manufacture, and arranged to register from one to one million cubic inches. The action was reversed so as to measure inspiration. The mouthpiece employed was Sibson's, and it was connected with the spirometer by vulcanized caoutchouc tubing, and could be fastened upon the head by elastic straps. The determination of the quantity of air inspired in the twenty-four hours was effected by three inquiries. 1. By using the spirometer whilst in the quiet sitting posture, during five minutes at the commencement of each quarter of an hour, from five A.M. to half-past six P.M., and of each half-hour from half-past six P.M. to half-past three A.M.

Exercise was taken in the intervals, and food was eaten at half-past eight A.M., one, half-past five, and half past eight P.M. 2. By using the spirometer without intermission during the whole of the twenty-four hours excepting at intervals amounting collectively to forty minutes. 3. By an inquiry similar to the second, but continued through the night only. In all these inquiries, the rate of respiration and pulsation, with the temperature of the wet and dry bulbs, and the barometric pressure, were recorded.

Among the most important and interesting results are the following. The inquiry made during five minutes at the beginning of every quarter of an hour from five A.M. to half-past six P.M., and at the beginning of every half-hour from half-past six P.M. to half-past three A.M., gave the following average quantities in the sitting posture:—after supper, 354 cubic inches per minute; before breakfast, 358; after breakfast, 445; after dinner, 448; and after tea, 454. Mental excitement on several occasions did not influence the quantity of air inspired when the respiration took place only once in five minutes. Sleep occurred with the lowest quantity of air inspired, —viz., with 334 cubic inches per minute, but the quantity increased during sleep to 371 per minute. Posture increased the quantity of air inspired—in the sitting over the lying posture, and in the standing over the sitting posture. The increase in the standing over the lying posture varied from 20 to 96 cubic inches per minute. Riding in or upon an omnibus increased the quantity about 250 inches per minute over that inspired when sitting at rest. Riding on horseback increased it—at the walking pace, 450 cubic inches, cantering 900, and and trotting 1,300 cubic inches per minute. Railway travelling on the engine increased it 200 cubic inches—in the third-class carriages nearly 200, in the second-class 150, and in the first-class 100. The quantity was greatest at the speed of from thirty to forty miles per hour. Gentle walking increased the respiration from 169 to 692 cubic inches per minute; when moderate it increased it about 500, and when fast the increase was from 1,206 to 1,611. Gentle running increased it 1,900, and fast running 2,325 to 2,500 cubic inches per minute. Carrying weights from 20 lbs. to 118 lbs., at the speed of three miles per hour, increased the quantity of air inspired about 1,900 cubic inches per minute. Heat and sunlight increased the rate of respiration from 16·8 to 17·8 per minute. Darkness lessened the quantity of air inspired to the extent of 32 cubic inches per minute. Considerable increase of artificial heat caused increased respiration, and considerable decrease the contrary; and these changes increased by continuance.

The author next gave the effects of a great variety of food and drink on respiration. The most remarkable changes were produced by the following articles. Milk increased the respiration 33 to 49 per minute; potatoes, only 0 to 6; coffee, 19 to 25; tea, 28 to 96; sugar, 60 to 88; rum, 34 to 42; whilst, on the other hand, cod-liver oil decreased the quantity of air inspired 10 to 65 cubic inches per minute, and olive oil 94 per minute. The temperature of the breath varied with that of the inspired air, but not proportionately. It was, on the average, 94°·7 in the room, and 89°·1 in the open air.

In the last part of the paper, Dr. Smith proceeded to notice the most remarkable deductions which might be drawn from his investigations. The detailed and averaged quantities of air breathed by him at various periods of the day, and under certain defined conditions, permitted an approximative estimate to be made of the quantities breathed by various classes of the community, and of the quantities of chemical elements required to combine with the oxygen. Thus an unoccupied gentleman would probably spend nine hours in the lying posture, eleven in the sitting posture, one in walking at the rate of two miles per hour, and three hours in standing, or walking at the rate of one mile per hour. The quantity of air thus inspired by him daily might be estimated as follows:—

9	hours in the lying posture . .	243,000	cubic inches.
11	„ sitting	351,780	„
1	„ walking	66,000	„
3	„ standing	144,000	„

giving a total of 804,780 cubic inches of air breathed daily. An ordinary tradesman might be estimated to pass eight hours and a half in the lying posture, six in the sitting posture, three in walking, and four in standing. He would then breathe a total daily quantity of 958,580 cubic inches. The hard-working labourer would probably breathe 1,368,390 cubic inches of air daily. The three classes thus differed greatly in the quantity of oxygen which they inspire, and therefore in the quantity of food required by them; and if each obtained a suitable quantity of material to unite with the oxygen, the labourer would still have greater wear of system than the unoccupied man.

The estimation of the wear of system from various kinds of labour might be made from this inquiry, if the quantity of air inspired might be regarded as a tolerably fair indication of that result—such, for example, as the hard labour of felons, the marching of soldiers, and the ordinary mode of travelling by the community. Hence might be inferred the amount of food and rest which each condition requires. It is also possible to increase or lessen the needful quantity of food (within limits) with some degree of certainty; and it would be learned how much more costly the maintenance of soldiers must necessarily be in time of war than peace, and that of felons at forced labour than in idleness. We would further learn how to lessen the wear of system arising from such exertion as the carrying of burdens, by reducing the speed at which they are borne.

These inquiries also enabled us to account for the inability of many persons to make an ascent, except at the slowest pace, and for the great inequality in all persons between the effect of ascending steps and walking on level ground at the same speed. From his investigations and experience in Switzerland, the author believed that his views accounted for such accidents as the spitting of blood, which have occurred whilst ascending mountains, without reference to the degree of atmospheric pressure. This was, in part, independent of chemical changes, and was due mainly to the capacity of the lungs and trachea to receive a certain quantity of air in a given time, and of the heart and bloodvessels to carry on the current of blood, and especially to maintain a due relation between the pulmonic and systemic circuits. They also explained the conservative influence of dark rooms in eastern and southern climes, and of night in all climates. In like manner, they indicated the reason of the unhealthiness of buildings with deficient light—as prison-cells and many dwellings of the poor—and also of nervous persons living much in seclusion. It was probable that change of season varied the quantity of air inspired. Heated rooms led to exhaustion indirectly, by increasing the activity of every function. Cold, when applied to the skin, increased respiration, whilst the breathing of cold air lessened the quantity of air inspired. Sleep and quietude were naturally associated with darkness and diminished activity of functions; and therefore wakefulness and labour at those periods of the day must induce more wear of system. Hence the ill effect of night labour. At the same time, the ease with which some persons pursued mental labour at night might be owing to the lessened vital actions at that period.

Breakfast seemed to be the most important meal to the system, since it was taken after a long interval, and produced a greater effect upon the frame than any other meal. The effect of food did not pass away between the meals, or during the working day. Since a due relation between the respiratory function and the food supplied to the system was one of the most important problems of life, these inquiries are of great value, as they served to prove how wisely our natural appetites lead us to a due combination of food, while at the same time they explained the ill consequences of what is termed "high living." Dr. Smith's interesting paper was accompanied by an extensive series of tables and curves illustrating his investigations.

Dr. Theophilus Thompson was unwilling that such a communication should pass without comment, although from the copiousness of material it was difficult to select. The observation of the author, that sugar increased the amount of respiration, was certainly opposed to the opinion he (Dr. Thompson) had been induced to form from other experiments, particularly those made a few years since by Dr. Böcker of Bonn, who, when varying his diet by the addition of two ounces of sugar daily, found the carbonic acid exhaled from his lungs reduced by about one-tenth. Similar results had also occurred under the use of diluted alcohol, and of various alcoholic drinks. Brandy, beer, white Rhenish wine, and still more red Burgandy, occasioned a reduction in the quantity of carbonic acid expired; the average reduction being, probably, about a fifth. Tea, in Dr. Böcker's experiments, did not materially influence the respiratory combustion, but it acted like alcoholic drinks as respected the reduction of earthy phosphates in the urine—a result more observable under the alcoholic experiments, and most of all from the use of sugar, by which the earthy phosphates were reduced one-half; the general conclusion being, that all these agents tended to arrest the metamorphosis of tissue, and thus to enable us to do with a less amount of ordinary food. It would thus appear that Dr. Smith's experiments, except in the case of brandy, and, to a certain extent, tea, were not in har-

mony with the statements of Böcker; for although the quantity of respiration had not necessarily an exact relation to the carbonic acid exhaled, it was reasonable to expect these conditions to increase or diminish together. He (Dr. Thompson) mentioned these points, not as throwing doubt on the experiments of the author, but as proving the necessity for further inquiry. Observations made with such care and zeal were of peculiar value in inquiries not merely affecting the restoration of the sick, but illustrating agencies important to the whole community, because affecting, moment by moment, the comfort and efficiency of persons in health.

Professor SHARPEY bore testimony to the careful precautions and patient labour with which the author's experiments had been made, as peculiarly calculated to lead to trustworthy results. It was a curious circumstance that brandy and rum should act differently on the respiration—the former decreasing, the latter increasing it. He (Dr. Sharpey) agreed with the opinion expressed by Dr. Thompson, that with increase of respiration, an increase of carbonic acid must be expected, although not necessarily proportional. The inquiry instituted opened questions of remarkable interest. The different amount of respiration in men and women was curious. Andral and Gavarret, for example, had observed that the amount of respiration in women, particularly after puberty, was much less than that of men. Dr. Smith's remarks on the influence of light confirmed those of other investigators. Frogs had been observed to have their respiration increased by this agent. He (Dr. Sharpey) believed not only through its influence on the skin, but probably also through the medium of the eye. He considered that the harmony between the author's results and those obtained by the best previous observers was evidence of their truthfulness.

Professor CARPENTER gave an interesting description of the apparatus employed by the author, and showed the great advantage derivable from a lengthened and continuous series of observations, so contrived as to avoid the restraint and discomfort which some other modes of experiment involved, whilst free from different sources of uncertainty present in observations made in confined chambers without the use of any apparatus. Carrying out such observations continuously for twenty-four hours without fatigue implied normal conditions. Dr. Carpenter referred to the remarks made on light and darkness in relation to respiration. He knew of instances in which persons were affected with laborious and distressing breathing if the candle was extinguished during their sleep. Such instances were extreme, but they were favourable to the opinion that light under ordinary conditions had some effect as a stimulus to the reflex actions concerned in the respiration.

Mr. BABBAGE had often regretted that such important functions as the circulation and respiration were disregarded in books on natural history. He thought the average rapidity of the pulse and respiration of animals should be recorded as a part of the description in works on zoology, and that every intelligent person might assist, especially as respects domestic animals, in establishing the averages. Mr. Babbage had lately at the Zoological Gardens counted the respirations of various animals. He was understood to say that he found that of the lepidosiren rather more than 5 in a minute, of the flounder, 15, the rhinoceros 17, and the Bengal tiger 25.

Editor's Letter Box.

POOR-LAW MEDICAL REFORM.

LETTER FROM RICHARD GRIFFIN, ESQ.

SIR,—I shall feel obliged for space to inform the Poor-Law Medical Officers that I have forwarded their petition to the House of Commons. It received the signatures of 191 gentlemen at the Freemasons' Hall, 114 of whom were Union officers. Of the latter, 93 are resident in various parts of the kingdom, and some of them at great distances from London; indeed, one gentleman travelled nearly 300 miles for the express purpose of attending the meeting: a reproof to his metropolitan brethren, 21 only of whom could spare time to appear at the Hall and sign the petition.

A report of the meeting has been sent to every member of the House of Commons; also one to each Poor-Law Medical Officer. Should any of the latter have been accidentally omitted, a copy shall be immediately sent on application. To all those who have joined the Association an abbreviated form of petition has been sent. I trust they will not only sign it themselves, but endeavour to persuade their colleagues to do the same, and send it speedily to the House of Commons. I have not forwarded petitions to the non-subscribers or to those who signed the petition at the meeting; but should any gentleman desire to have them, and will write to me to that effect, I will send him one or more immediately. I have written to the Council of the Royal College of Surgeons and the Apothecaries Hall, urging them to petition in our favour. I have also written to the Poor-Law Board a copy of the letter I enclose. I am, etc., RICHARD GRIFFIN.

12, Royal Terrace, Weymouth, June 6th, 1857.

"12, Royal Terrace, Weymouth, 6th June, 1857.

"MY LORDS AND GENTLEMEN,—I have the honour to enclose you a copy of the petition to Parliament from the Union medical officers, and also a report of the meeting held the 28th ultimo. It is not through any want of respect that the Union medical officers have not again memorialised your Honourable Board, but from a feeling that you are fully acquainted with their grievances from the numerous memorials forwarded to you last year, which you promised to take into consideration. No improvement in their position having accrued, it is the general feeling that your Honourable Board require to have your hands strengthened by the intervention of the legislature. They have therefore again petitioned the House of Commons, and trust you will shortly be enabled to carry out that reform in the Poor-Law medical department which is so much needed, and which your medical officers, as a body, so ardently desire.

"I have the honour to be, my Lords and Gentlemen,

"Your obedient servant, "RICHARD GRIFFIN.

"To the Poor-Law Board."

SPECULUM CASES.

LETTER FROM AUGUSTIN PRICHARD, ESQ.

SIR,—Many of us can support with parallel cases the well-timed remarks made by Mr. Soden, of Bath, in the paper published in last week's JOURNAL.

Here, for instance, there was an entertaining story going about a short ago, to the effect that a speculum doctor, of considerable celebrity in that lucrative line of business, had been abruptly prevented from completing his daily inspection of a certain os uteri, by the protrusion of a child's head from the other side of the aperture he was about to cauterise, in happy ignorance that there was anybody within. I cannot vouch for the accuracy of this, but I think it not improbable.

The following outline of a case in point is true, and I had a slight personal acquaintance with the unfortunate subject of it.

A well educated and elegant young lady, about two or three and twenty years of age, having been ailing for some time, was taken by her mother to London for "further advice" from the West of England. There she was advised to consult a speculum doctor, who, I am sure, need not have sunk so low; for at one time he had the superintendence of the practical midwifery class connected with a large London Hospital,—a post, one would think, likely to lead, in point of respectability at any rate, to better things. He diagnosed and discovered uterine disease, and treated the poor girl in the usual way for two or three months, when she was taken home as her health was not improving. She lingered for some time afterwards, and died of consumption. A *post mortem* examination was made, showing the usual appearances of death by tubercular disease of the lungs; the uterus was healthy.

A case of this kind requires little comment. Nobody can say that three months of London air and speculum treatment actually caused the death of this lady; but I think we may say that at an early stage of tubercular disease such a plan would take away the little chance there ever is of arresting the progress of pulmonary consumption.

About the morality of subjecting a delicately brought up young lady to such manipulations, when there was no pretext for it on the score of disease of the uterus, there is no need to say a word.

In conclusion, I wish I could add that this kind of practice did not extend beyond the metropolis.

I am, etc., AUGUSTIN PRICHARD.

Clifton, June 1st, 1857.

[The abuse of the speculum, of the stethoscope, or of any other instrument, forms no argument against its legitimate use. EDITOR.]

this might be suppressed or held in check; but whether it might be eradicated, was a question which he would not venture to answer in the affirmative. He was satisfied of the power of well selected remedies in repressing, and often indefinitely postponing, the paroxysm; and he particularly insisted on the importance of dietetic and regiminal treatment. The number of apparent cures was 15, or 28·85 per cent.; in other instances, more or less benefit was obtained. The duration of the disease before the commencement of treatment had an obvious influence over its curability. Eight of the 15 (apparent) cures were wrought in cases that had lasted one year or under, four were of two years duration, one of three, one of six, and one of eight years. The treatment adopted had varied with the nature of the constitutional affection in each case; but the main indications were to remove local irritation by counterirritants, to promote the healthy action of the secernent organs, and to give a tone to the constitution by vegetable and metallic roborants. The author expressed his belief that there was no specific for epilepsy; the salts of zinc certainly failed to remove it in many cases.

In a postscript he detailed the results of an analysis of the Returns of the Registrar-General with reference to sex in deaths from epilepsy during seven years; which gave 6729 males, and 6149 females, or 52·26 per cent. of the one sex to 47·73 of the other.

TREATMENT OF WOUNDS OF THE PALMAR ARCHES BY FORCED FLEXION OF THE ARM. BY J. GILES, ESQ., M.R.C.S.

[*Communicated by* T. B. Curling, Esq., F.R.S.]

After allusion to the various troublesome complications, and frequent very serious consequences which attend wounds of the palm, when circumstances prevent the application of ligatures at the seat of injury, the author remarked upon the advantages of a method of treatment which should have the advantage of checking the hæmorrhage without either severe local pressure or ligature of vessels remote from the wound; such advantages would seem to be afforded by the plan of flexing the forearm upon the arm with sufficient force to arrest the bleeding, and maintaining it in that position so long as may be necessary. The author related five cases of wound of the palmar arch, and one of wound of the forearm, which were thus treated, and all with success, save one, in which, however, the procedure was not had recourse to until a month after the accident. The merit of originating the mode of treatment was given to M. Durwell, by whom it was proposed in *L'Union Médicale*, tome iii, p. 341.

ANTEFLEXION OF THE UTERUS CONSIDERED AS A NORMAL ANATOMICAL CONDITION. BY J. H. BENNET, M.D.

The author's attention was attracted some years ago, during a series of investigations into the condition of the os internum during life, by the anatomical fact that the uterine cavities and the uterus itself, in women who have never borne children, are generally more or less anteflexed. He thinks it proved that this was misunderstood because stem pessaries are invariably made perfectly straight, and anteflexion has been universally described as an abnormal or morbid condition. M. Huguier, however, published a memoir some years ago, describing anteflexion as an occasional congenital condition, but he described it as accidental and exceptional. The author's researches were begun with a view to determining the value of contraction of the os internum as a cause of sterility. He found that when the uterine sound met with resistance there, a small wax bougie could be passed, which, if allowed to remain for a minute or two in the uterus of a woman who had borne no children, presented when withdrawn a slight anterior curve. The same effect continues in some degree after one or more parturitions. This state can scarcely be recognised by digital examination under ordinary circumstances, but is readily perceived when decided, and may become very great in exceptional bases. The author then adverted to the observations of M. Boullard on this subject, who describes anteflexion as the natural anatomical direction of the uterus. He finds it most marked in the fœtus, less so in the child, and least in the adult; and that it ceases to be perceptible in most women who have borne children. The author thought that M. Boullard had rather exaggerated the degree of curvature. He next pointed out the pathological bearing of anteflexion, believing that it might be treated as a morbid state, especially if the uterus be enlarged by chronic inflammation, which would render the curvature more marked. He thought attempts to straighten the uterus likely to be injurious, and that no treatment ought to be employed except what might be necessary to relieve the congestion of the organ. He did not think it had any definite relation to irregular menstruation, but when both conditions were coincident the general health was much below par, and the anteflexion was commonly very decided.

Mr. J. Wood thought the cases referred to depended upon the degree of fulness or emptiness of the bladder and rectum. He had seen the peculiarity in question in the *fœtus in utero*, and in very young persons, and at such periods there appeared to be less curvature than in after life. He did not consider the curve a permanent one, but one which depended upon the varying conditions of the pelvic regions.

MEDICAL SOCIETY OF LONDON.

Saturday, April 25th, 1857.

Francis Hird, Esq., President, in the Chair.

THE NECROSIS OF CANCER, AND ITS CONSEQUENT ENUCLEATION. BY J. M. MOULLIN, ESQ.

The author gave the history of six cases of cancer of the breast, and showed several specimens which had been enucleated by the action of the chloride of zinc. These specimens were proof of the result of a mode of proceeding which, as far as he could ascertain, was entirely new. The object proposed was not to destroy tumours piecemeal, making layer after layer slough and separate by successive applications, which are each brought into contact with an extremely irritated surface; but rather to induce the slow death of the morbid growth by causing its substance to become day by day penetrated more and more deeply by an agent which coagulates the blood in its vessels, and acts in like manner upon the living albuminous solid; and finally, when completely necrosed, to become enucleated *en masse*. The principle was, to proportion the rate of our therapeutic efforts to that of the disease dealt with. The morbid action that would be exasperated by violent measures, yielded kindly to a mild influence steadily maintained. Such, the author believed, was the *rationale* of the treatment which he fully described in the history of the cases. Mr. Moullin stated that the essential point in his plan of proceeding was the mode in which the remedy was used; and it was quite possible that other remedies used in the same way might produce like effect. The history of the cases furnished a good illustration of the disease in its various stages. One of the cases, of one year's duration, was in its first and by far the most favourable stage for either plan of treatment, being about the size of a nut, perfectly moveable, and rarely causing much pain. The disease, the author thought, at this stage might, with all propriety, be denominated local. Another case, of twelve years standing, was a very good example of the disease in its second stage; the tumour was of the size of an ordinary orange, of stony hardness, well defined, yet moveable; the pain was more of a lancinating character, as if a needle were run in. Next came two cases, the one of two, the other of twelve years growth, where the tumour was attached to the integuments, having the peculiar appearance previous to the commencement of ulceration, and forming the third stage. In two other cases, one of twenty, the other of three years duration, ulceration had taken place, presenting an open, excavated sore, with hardened, everted, irregular edges, uneven base, covered with a grey slough, offensive thin discharge, frequent losses of blood, and all the usual train of constitutional symptoms. It was in such cases that the plan of treatment proposed would be found most advantageous. The object of this plan of treatment was not merely to destroy diseased parts, but to modify the abnormal vitality of the subjacent tissues, without which the disease would reappear. The effect of the chloride of zinc in cancerous cases had long been known to the profession; and it had been largely used on the continent with marked success, and in this country by Mr. Ure. The extirpation of cancer by the necrosing agent never created any serious inconvenience; while an amputation of the breast might not always have the most favourable issue. The chloride of zinc was most useful in open or ulcerated cancers and cancroid growths generally, where the knife was utterly out of the question; also, in the enucleation of tumours of a doubtful nature; and in secondary cancerous formations following operations with the knife. In the treatment of rodent ulcer, the *noli me tangere* of some authors, the author stated that two important questions presented themselves for the consideration of the professsion. The first was the possibility of the enucleation of tumours, malignant or benign, by the action of chloride of zinc. This first point, he thought, was satisfactorily proved, by placing facts before his professional brethren,

and he would leave it to them to declare whether they were satisfied with the result. As to the second point—viz., the liability and probability of a return of disease after enucleation of the tumour—this nothing but time and experience could decide.

Dr. MACKENZIE remarked, that the paper could not decide the respective value of the local treatment of cancer by enucleation or the knife, inasmuch as the cases related were too recent on which to form any opinion. It was still a question how far the removal of the local disease did away with the chances of return. Cases had constantly occurred in which the removal of the local disease was followed by internal cancerous affections, and had destroyed the patients.

Mr. BARWELL said that it was questionable whether any local treatment would so modify the constitutional taint as to prevent a recurrence of the disease. He was surprised that there had been so little pain in Mr. Moullin's cases. In 1824, M. Cancoin had used the arsenical paste in some cases with a fatal result. He then experimented with seventeen different kinds of escharotics, and he found that of these nitric acid was the least painful in its application, whilst chloride of zinc was the fourteenth on the list. He (Mr. Barwell) had used the tannic acid in some cases of cancer. To be of service, it was necessary that there should be much care in its application. Slits must be made in the slough to enable the tannic acid to permeate through it. Applied in this way, it was productive of little pain.

Mr. JABEZ HOGG did not feel satisfied with the evidence produced by the author as to the character of the tumours which had been enucleated by him. In the absence of a microscopic examination, the diagnosis must necessarily be imperfect. Numbers of cases were called cancer, treated as such, and said to be cured, which were in reality benign tumours.

Mr. BIRKETT had been quite disappointed in the paper, which contained nothing new. Escharotics had been extensively employed, to prevent the natural alarm which patients had on the use of the knife. With respect to true cancer, no case had been recorded as successful after removal which was not eventually followed by death from secondary deposits in some other organs. It was said in favour of escharotics, that they had so much influence on the surrounding tissues as to prevent the recurrence of the disease; but this was a mere assertion, and had not a tittle of proof to rest upon. The question at issue was clearly "caustic *versus* knife"; and he contended, in opposition to the statement of the employers of caustic, that the knife was not uncertain, but that the local disease could be more safely and readily extirpated by it than by caustic. He had tried the caustic; it had been also extensively used by Key, Callaway, and Brodie. Mr. Key had tried it in fifteen or twenty cases. All the cases had terminated with exactly the same results as if the knife had been used. M. Cancoin had operated in four cases in this country, and he (Mr. Birkett) was in a condition to state the ultimate results of these proceedings. The first case was that of a lady, thirty years of age, who had been operated upon three times by Sir Benjamin Brodie, and twice or thrice by Mr. Turner, of Manchester. The case was afterwards treated by M. Cancoin, and did not recur. But it was well known that this was not a case of cancer at all, but was simply one of adenocele. It was reported, however, at the time as a case of cancer, and vaunted as a cure of that disease. The other three cases terminated fatally, just as though the ordinary operation by the knife had been performed. The cases recorded by M. Cancoin in his work might be divided into four distinct classes:—1, cases of chronic abscess; 2, cases of ordinary adenocele; 3, cases of irritable mamma. These, of course, all did well. The 4th were cases of true cancer, all of which had an unsatisfactory termination. He (Mr. Birkett) contended that the use of the caustic had no advantage whatever over that of the knife; and he called upon the author of the paper to state explicitly what was the real influence which the caustic exerted over the tissues surrounding the primary growth, so as to prevent a recurrence of the disease?

Dr. ROGERS had seen a case which had been operated upon in the Middlesex Hospital by Dr. Fell. The patient had died, after three weeks of agonising torture, from carcinomatous disease of the chest, and effusion. He had seen a similar case of cancer of the os uteri, but with the same results, under the care of Dr. Pattison. This patient had died after the most intense agony, consequent upon the application of the caustic.

Mr. WEEDEN COOKE believed that the author's plan of slicing and canterising a cancerous breast was identical with that pursued by Dr. Fell. It was a most painful and severe operation, protracted for thirty or forty days; and, after all this suffering, did no more than the knife could do in a few minutes, without any pain at all, with the aid of chloroform. The plan pursued by Mr. Stanley, at St. Bartholomew's Hospital, was a much more humane and equally efficacious proceeding; but, in Mr. Cooke's opinion, excision by the knife, if an operation was necessary at all, was the only proceeding that ought to be sanctioned by the profession. Mr. Cooke, however, considered that operations, whether by caustic or the scalpel, were undesirable; that the disease was not eradicated by them, but that the dyscrasia which accompanied the disease was thereby increased, and life shortened. On the other hand, by supporting diet and tonic treatment, the constitution was enabled to resist the progress of the disease, and bring about that resolution by atrophy of the tumour which was observed in so many cases at the Cancer Hospital. Mr. Cooke thought that the whole profession would eventually protest against this revival of a treatment, painful in the extreme, and having no single advantage over the usual mode of excision by the knife.

Mr. HANCOCK did not see the advantage of Mr. Moullin's application over the use of the knife; in one case related by that gentleman, in which one of the glands of the axilla was enlarged, most surgeons would have either removed the gland, or have refrained from any operative procedure whatever.

Mr. MOULLIN, in reply, admitted that no microscopic examination had been made in either of his cases; but his opinion that they were cases of cancer, had been fortified by that of others, well able to judge of the nature of the disease, and who had sent them to him as cases unfit to remove with the knife. He did not assert that these cases were cured, nor could he fairly do so, as his experiments had only commenced in December last. He had merely brought them forward as instances of the enucleation of the local disease by caustic. So far he thought they were entitled to the notice of the society. He should watch these cases carefully, and report upon their progress at some future opportunity. He had other cases under treatment, respecting which he should lay the particulars before the profession. With respect to pain, in only one case was it remarkable, and in this the agony was beyond description; but in this instance the nitric acid had not been employed.

ROYAL SOCIETY.

LORD WROTTESLEY, President, in the Chair.

INQUIRIES INTO THE QUANTITY OF AIR INSPIRED AT EACH FIVE MINUTES, ONE QUARTER, AND HALF-HOUR OF THE DAY AND NIGHT, AND UNDER THE INFLUENCE OF VARIOUS KINDS OF EXERCISE, FOOD, AND MEDICINE, TEMPERATURE, ETC.

BY EDWARD SMITH, M.D., LL.B.

THE communication consisted of three parts, and comprised the results of 1,200 series of observations. The first part contained the results of three investigations as to the quantity of air breathed during the whole of the twenty-four hours, and registered every fifteen and thirty minutes. The second part described the influence of posture, riding on horseback, travelling by omnibus and railway, rowing, swimming, walking, carrying of weights, the labour of the treadwheel, ascending and descending steps—also of sunlight and darkness, artificial heat, various diets, etc. The third part was devoted to certain inquiries in relation to the temperature of the body. There were not any records of inquiries similar to those contained in the first part of this paper, and extremely few in reference to any portion of the second. The aim of previous observers had been to determine the chemical effects of respiration.

The author was himself the subject of all the investigations. He is thirty-eight years of age, six feet in height, healthy and strong, and with a vital capacity of the lungs of 280 cubic inches. The instrument employed was Glover's patent dry gas meter of improved manufacture, and arranged to register from one to one million cubic inches. The action was reversed so as to measure inspiration. The mouthpiece employed was Sibson's, and it was connected with the spirometer by vulcanized caoutchouc tubing, and could be fastened upon the head by elastic straps. The determination of the quantity of air inspired in the twenty-four hours was effected by three inquiries. 1. By using the spirometer whilst in the quiet sitting posture, during five minutes at the commencement of each quarter of an hour, from five A.M. to half-past six P.M., and of each half-hour from half-past six P.M. to half-past three A.M.

Exercise was taken in the intervals, and food was eaten at half-past eight A.M., one, half-past five, and half past eight P.M. 2. By using the spirometer without intermission during the whole of the twenty-four hours excepting at intervals amounting collectively to forty minutes. 3. By an inquiry similar to the second, but continued through the night only. In all these inquiries, the rate of respiration and pulsation, with the temperature of the wet and dry bulbs, and the barometric pressure, were recorded.

Among the most important and interesting results are the following. The inquiry made during five minutes at the beginning of every quarter of an hour from five A.M. to half-past six P.M., and at the beginning of every half-hour from half-past six P.M. to half-past three A.M., gave the following average quantities in the sitting posture:—after supper, 354 cubic inches per minute; before breakfast, 358; after breakfast, 445; after dinner, 448; and after tea, 454. Mental excitement on several occasions did not influence the quantity of air inspired when the respiration took place only once in five minutes. Sleep occurred with the lowest quantity of air inspired, —viz., with 334 cubic inches per minute, but the quantity increased during sleep to 371 per minute. Posture increased the quantity of air inspired—in the sitting over the lying posture, and in the standing over the sitting posture. The increase in the standing over the lying posture varied from 20 to 96 cubic inches per minute. Riding in or upon an omnibus increased the quantity about 250 inches per minute over that inspired when sitting at rest. Riding on horseback increased it—at the walking pace, 450 cubic inches, cantering 900, and and trotting 1,300 cubic inches per minute. Railway travelling on the engine increased it 200 cubic inches—in the third-class carriages nearly 200, in the second-class 150, and in the first-class 100. The quantity was greatest at the speed of from thirty to forty miles per hour. Gentle walking increased the respiration from 169 to 692 cubic inches per minute; when moderate it increased it about 500, and when fast the increase was from 1,206 to 1,611. Gentle running increased it 1,900, and fast running 2,325 to 2,500 cubic inches per minute. Carrying weights from 20 lbs. to 118 lbs., at the speed of three miles per hour, increased the quantity of air inspired about 1,900 cubic inches per minute. Heat and sunlight increased the rate of respiration from 16·8 to 17·8 per minute. Darkness lessened the quantity of air inspired to the extent of 32 cubic inches per minute. Considerable increase of artificial heat caused increased respiration, and considerable decrease the contrary; and these changes increased by continuance.

The author next gave the effects of a great variety of food and drink on respiration. The most remarkable changes were produced by the following articles. Milk increased the respiration 33 to 49 per minute; potatoes, only 0 to 6; coffee, 19 to 25; tea, 28 to 96; sugar, 60 to 88; rum, 34 to 42; whilst, on the other hand, cod-liver oil decreased the quantity of air inspired 10 to 65 cubic inches per minute, and olive oil 94 per minute. The temperature of the breath varied with that of the inspired air, but not proportionately. It was, on the average, 94°·7 in the room, and 89°·1 in the open air.

In the last part of the paper, Dr. Smith proceeded to notice the most remarkable deductions which might be drawn from his investigations. The detailed and averaged quantities of air breathed by him at various periods of the day, and under certain defined conditions, permitted an approximative estimate to be made of the quantities breathed by various classes of the community, and of the quantities of chemical elements required to combine with the oxygen. Thus an unoccupied gentleman would probably spend nine hours in the lying posture, eleven in the sitting posture, one in walking at the rate of two miles per hour, and three hours in standing, or walking at the rate of one mile per hour. The quantity of air thus inspired by him daily might be estimated as follows:—

9 hours	in the lying posture . .	243,000	cubic inches.
11 „	sitting	351,780	„
1 „	walking	66,000	„
3 „	standing	144,000	„

giving a total of 804,780 cubic inches of air breathed daily. An ordinary tradesman might be estimated to pass eight hours and a half in the lying posture, six in the sitting posture, three in walking, and four in standing. He would then breathe a total daily quantity of 958,580 cubic inches. The hard-working labourer would probably breathe 1,368,390 cubic inches of air daily. The three classes thus differed greatly in the quantity of oxygen which they inspire, and therefore in the quantity of food required by them; and if each obtained a suitable quantity of material to unite with the oxygen, the labourer would still have greater wear of system than the unoccupied man.

The estimation of the wear of system from various kinds of labour might be made from this inquiry, if the quantity of air inspired might be regarded as a tolerably fair indication of that result—such, for example, as the hard labour of felons, the marching of soldiers, and the ordinary mode of travelling by the community. Hence might be inferred the amount of food and rest which each condition requires. It is also possible to increase or lessen the needful quantity of food (within limits) with some degree of certainty; and it would be learned how much more costly the maintenance of soldiers must necessarily be in time of war than peace, and that of felons at forced labour than in idleness. We would further learn how to lessen the wear of system arising from such exertion as the carrying of burdens, by reducing the speed at which they are borne.

These inquiries also enabled us to account for the inability of many persons to make an ascent, except at the slowest pace, and for the great inequality in all persons between the effect of ascending steps and walking on level ground at the same speed. From his investigations and experience in Switzerland, the author believed that his views accounted for such accidents as the spitting of blood, which have occurred whilst ascending mountains, without reference to the degree of atmospheric pressure. This was, in part, independent of chemical changes, and was due mainly to the capacity of the lungs and trachea to receive a certain quantity of air in a given time, and of the heart and bloodvessels to carry on the current of blood, and especially to maintain a due relation between the pulmonic and systemic circuits. They also explained the conservative influence of dark rooms in eastern and southern climes, and of night in all climates. In like manner, they indicated the reason of the unhealthiness of buildings with deficient light—as prison-cells and many dwellings of the poor—and also of nervous persons living much in seclusion. It was probable that change of season varied the quantity of air inspired. Heated rooms led to exhaustion indirectly, by increasing the activity of every function. Cold, when applied to the skin, increased respiration, whilst the breathing of cold air lessened the quantity of air inspired. Sleep and quietude were naturally associated with darkness and diminished activity of functions; and therefore wakefulness and labour at those periods of the day must induce more wear of system. Hence the ill effect of night labour. At the same time, the ease with which some persons pursued mental labour at night might be owing to the lessened vital actions at that period.

Breakfast seemed to be the most important meal to the system, since it was taken after a long interval, and produced a greater effect upon the frame than any other meal. The effect of food did not pass away between the meals, or during the working day. Since a due relation between the respiratory function and the food supplied to the system was one of the most important problems of life, these inquiries are of great value, as they served to prove how wisely our natural appetites lead us to a due combination of food, while at the same time they explained the ill consequences of what is termed "high living." Dr. Smith's interesting paper was accompanied by an extensive series of tables and curves illustrating his investigations.

Dr. Theophilus Thompson was unwilling that such a communication should pass without comment, although from the copiousness of material it was difficult to select. The observation of the author, that sugar increased the amount of respiration, was certainly opposed to the opinion he (Dr. Thompson) had been induced to form from other experiments, particularly those made a few years since by Dr. Böcker of Bonn, who, when varying his diet by the addition of two ounces of sugar daily, found the carbonic acid exhaled from his lungs reduced by about one-tenth. Similar results had also occurred under the use of diluted alcohol, and of various alcoholic drinks. Brandy, beer, white Rhenish wine, and still more red Burgandy, occasioned a reduction in the quantity of carbonic acid expired; the average reduction being, probably, about a fifth. Tea, in Dr. Böcker's experiments, did not materially influence the respiratory combustion, but it acted like alcoholic drinks as respected the reduction of earthy phosphates in the urine—a result more observable under the alcoholic experiments, and most of all from the use of sugar, by which the earthy phosphates were reduced one-half; the general conclusion being, that all these agents tended to arrest the metamorphosis of tissue, and thus to enable us to do with a less amount of ordinary food. It would thus appear that Dr. Smith's experiments, except in the case of brandy, and, to a certain extent, tea, were not in har-

mony with the statements of Böcker; for although the quantity of respiration had not necessarily an exact relation to the carbonic acid exhaled, it was reasonable to expect these conditions to increase or diminish together. He (Dr. Thompson) mentioned these points, not as throwing doubt on the experiments of the author, but as proving the necessity for further inquiry. Observations made with such care and zeal were of peculiar value in inquiries not merely affecting the restoration of the sick, but illustrating agencies important to the whole community, because affecting, moment by moment, the comfort and efficiency of persons in health.

Professor SHARPEY bore testimony to the careful precautions and patient labour with which the author's experiments had been made, as peculiarly calculated to lead to trustworthy results. It was a curious circumstance that brandy and rum should act differently on the respiration—the former decreasing, the latter increasing it. He (Dr. Sharpey) agreed with the opinion expressed by Dr. Thompson, that with increase of respiration, an increase of carbonic acid must be expected, although not necessarily proportional. The inquiry instituted opened questions of remarkable interest. The different amount of respiration in men and women was curious. Andral and Gavarret, for example, had observed that the amount of respiration in women, particularly after puberty, was much less than that of men. Dr. Smith's remarks on the influence of light confirmed those of other investigators. Frogs had been observed to have their respiration increased by this agent. He (Dr. Sharpey) believed not only through its influence on the skin, but probably also through the medium of the eye. He considered that the harmony between the author's results and those obtained by the best previous observers was evidence of their truthfulness.

Professor CARPENTER gave an interesting description of the apparatus employed by the author, and showed the great advantage derivable from a lengthened and continuous series of observations, so contrived as to avoid the restraint and discomfort which some other modes of experiment involved, whilst free from different sources of uncertainty present in observations made in confined chambers without the use of any apparatus. Carrying out such observations continuously for twenty-four hours without fatigue implied normal conditions. Dr. Carpenter referred to the remarks made on light and darkness in relation to respiration. He knew of instances in which persons were affected with laborious and distressing breathing if the candle was extinguished during their sleep. Such instances were extreme, but they were favourable to the opinion that light under ordinary conditions had some effect as a stimulus to the reflex actions concerned in the respiration.

Mr. BABBAGE had often regretted that such important functions as the circulation and respiration were disregarded in books on natural history. He thought the average rapidity of the pulse and respiration of animals should be recorded as a part of the description in works on zoology, and that every intelligent person might assist, especially as respects domestic animals, in establishing the averages. Mr. Babbage had lately at the Zoological Gardens counted the respirations of various animals. He was understood to say that he found that of the lepidosiren rather more than 5 in a minute, of the flounder, 15, the rhinoceros 17, and the Bengal tiger 25.

Editor's Letter Box.

POOR-LAW MEDICAL REFORM.

LETTER FROM RICHARD GRIFFIN, ESQ.

SIR,—I shall feel obliged for space to inform the Poor-Law Medical Officers that I have forwarded their petition to the House of Commons. It received the signatures of 191 gentlemen at the Freemasons' Hall, 114 of whom were Union officers. Of the latter, 93 are resident in various parts of the kingdom, and some of them at great distances from London; indeed, one gentleman travelled nearly 300 miles for the express purpose of attending the meeting: a reproof to his metropolitan brethren, 21 only of whom could spare time to appear at the Hall and sign the petition.

A report of the meeting has been sent to every member of the House of Commons; also one to each Poor-Law Medical Officer. Should any of the latter have been accidentally omitted, a copy shall be immediately sent on application. To all those who have joined the Association an abbreviated form of petition has been sent. I trust they will not only sign it themselves, but endeavour to persuade their colleagues to do the same, and send it speedily to the House of Commons. I have not forwarded petitions to the non-subscribers or to those who signed the petition at the meeting; but should any gentleman desire to have them, and will write to me to that effect, I will send him one or more immediately. I have written to the Council of the Royal College of Surgeons and the Apothecaries Hall, urging them to petition in our favour. I have also written to the Poor-Law Board a copy of the letter I enclose. I am, etc., RICHARD GRIFFIN.

12, Royal Terrace, Weymouth, June 6th, 1857.

"12, Royal Terrace, Weymouth, 6th June, 1857.

"MY LORDS AND GENTLEMEN,—I have the honour to enclose you a copy of the petition to Parliament from the Union medical officers, and also a report of the meeting held the 28th ultimo. It is not through any want of respect that the Union medical officers have not again memorialised your Honourable Board, but from a feeling that you are fully acquainted with their grievances from the numerous memorials forwarded to you last year, which you promised to take into consideration. No improvement in their position having accrued, it is the general feeling that your Honourable Board require to have your hands strengthened by the intervention of the legislature. They have therefore again petitioned the House of Commons, and trust you will shortly be enabled to carry out that reform in the Poor-Law medical department which is so much needed, and which your medical officers, as a body, so ardently desire.

"I have the honour to be, my Lords and Gentlemen,
"Your obedient servant, "RICHARD GRIFFIN.

"To the Poor-Law Board."

SPECULUM CASES.

LETTER FROM AUGUSTIN PRICHARD, ESQ.

SIR,—Many of us can support with parallel cases the well-timed remarks made by Mr. Soden, of Bath, in the paper published in last week's JOURNAL.

Here, for instance, there was an entertaining story going about a short ago, to the effect that a speculum doctor, of considerable celebrity in that lucrative line of business, had been abruptly prevented from completing his daily inspection of a certain os uteri, by the protrusion of a child's head from the other side of the aperture he was about to cauterise, in happy ignorance that there was anybody within. I cannot vouch for the accuracy of this, but I think it not improbable.

The following outline of a case in point is true, and I had a slight personal acquaintance with the unfortunate subject of it.

A well educated and elegant young lady, about two or three and twenty years of age, having been ailing for some time, was taken by her mother to London for "further advice" from the West of England. There she was advised to consult a speculum doctor, who, I am sure, need not have sunk so low; for at one time he had the superintendence of the practical midwifery class connected with a large London Hospital,—a post, one would think, likely to lead, in point of respectability at any rate, to better things. He diagnosed and discovered uterine disease, and treated the poor girl in the usual way for two or three months, when she was taken home as her health was not improving. She lingered for some time afterwards, and died of consumption. A *post mortem* examination was made, showing the usual appearances of death by tubercular disease of the lungs; the uterus was healthy.

A case of this kind requires little comment. Nobody can say that three months of London air and speculum treatment actually caused the death of this lady; but I think we may say that at an early stage of tubercular disease such a plan would take away the little chance there ever is of arresting the progress of pulmonary consumption.

About the morality of subjecting a delicately brought up young lady to such manipulations, when there was no pretext for it on the score of disease of the uterus, there is no need to say a word.

In conclusion, I wish I could add that this kind of practice did not extend beyond the metropolis.

I am, etc., AUGUSTIN PRICHARD.

Clifton, June 1st, 1857.

[The abuse of the speculum, of the stethoscope, or of any other instrument, forms no argument against its legitimate use. EDITOR.]

THE EMPLOYMENT OF CALCAREOUS SALTS IN THE TREATMENT OF RICKETS AND OTHER MORBID CONDITIONS.

Letter from W. Budd, M.D.

Sir,—It appears from the Journal of the 23rd May, that Dr. Pidduck has recently read a paper before the Medico-Chirurgical Society, recommending the employment of calcareous compounds in the treatment of certain states of defective nutrition. The value of these compounds in the class of cases referred to has long been fully recognised here. For obvious reasons, it is in children who are being brought up in large towns that their efficacy is the most signal. Of this, perhaps, the most striking illustration is their effect in the cure of rickets. But short of rickets, which may be regarded as an extreme case, there are many states of very common occurrence in which their remedial power is no less manifest. Among the out-patients of the Bristol Royal Infirmary are numbers of children with large heads, tumid bellies, and pasty complexion; whose spines are too weak to support their bodies; who are slow in intellect and backward in teeth and speech, and who have reached the age of sixteen, eighteen months, and perhaps more, without ever having shown any desire to take to their feet. These characteristics, varying, of course, more or less in degree, make up a pathological portrait which most physicians to large hospitals situated in great towns will recognise as the type of a numerous group. In all such cases I have for many years past been in the habit of giving a simple combination, consisting of from five to ten grains of phosphate of lime, three times a day in chalk mixture. Where there is a palpable degree of anæmia, some simple chalybeate is added to the treatment. Theoretically, bone earth would seem to be the more appropriate agent; but when I began this practice, having no bone earth at hand, I adopted as a temporary expedient the mixture I have named, and found it answer so well, that what was first tried as a makeshift has since been purposely adhered to. Nothing can be more satisfactory than this plan of treatment. At the end of a week the improvement in the patient is already very apparent; at the end of a fortnight it is, generally, conspicuous. The result is not only a rapid consolidation of the bones, but, what perhaps is still more interesting, an equally rapid development of the mental and other powers. It is no doubt owing to the nature of the case that this result is as uniform as it is complete. In these two characteristics this method reminds me more of the virtue of lemon juice in scurvy than almost anything else I have seen in physic. The two things have probably this much in common, that, in supplying the one thing needful, they act on the same principle. Remedies which act thus have this paramount claim on the physician, that they admit of no substitute. In scurvy, unless the food or the medicine contain the antiscorbutic, all nature may be ransacked in vain for a remedy. In many of these states of defective nutrition in children, there is reason to believe that the same is true of the calcareous salt.

I have long thought it deserving of the most anxious inquiry, whether the growing deterioration and tendency to early decay which dentists have remarked in the teeth of the rising generation, may not be due to insufficient supply of the inorganic constituents of these important organs in the food by which children are nourished during the period of dental development. In towns especially, the whole mode of living, not only of man but of the animals which minister to man, is so artificial, and so few articles of diet are supplied under the primary conditions of nature, that such a contingency is quite possible. In default of better, Dr. Pidduck's biscuits, which contain lime derived from teeth, would furnish a simple means of meeting it. Rather more than a year ago, I suggested to an eminent druggist here the manufacture of biscuits of precisely similar composition, with a view at once to the teeth-bones of these young subjects.

I may add, that if my experience do not deceive me, the same mixture is a very sure remedy in that anxious and sometimes fatal disorder, *laryngismus stridulus*. At least, in some ten or twelve cases in which I have now tried it, the speedy subsidence of the malady has followed the employment of the medicine. In some instances the cessation of the morbid phenomena has been so rapid, that I have been led to suppose the virtue of this calcareous mixture in this last disease must be due simply to its antacid properties. But this is a question into which I have not cared to inquire.

It may be well to state in conclusion, that I communicated at some length the results here detailed, to a meeting of the Bath and Bristol Branch of our Association in the month of October last, on the occasion of an interesting paper by my friend Mr. Coe, on three cases of a disease allied to rickets. A very abridged account of what I said on the subject was given in the report of the meeting, which appeared in the Journal shortly after.

I am, etc., William Budd.

Parliamentary Intelligence.

HOUSE OF COMMONS.—Thursday, June 4th.

THE METROPOLITAN HOSPITALS.

Lord Raynham gave notice that on an early day he should move for a Select Committee to inquire into the state of the Metropolitan Hospitals.

SALE OF POISONS BILL.

Earl Granville moved that the House go into Committee on the Bill: but subsequently, on the suggestion of Lord Redesdale, it was referred to a Select Committee.

Friday, June 5th.

PAUPER LUNATICS (MARYLEBONE).

On the motion of Mr. Kinnaird, a copy was ordered of any communication from the Board of Guardians of St. Marylebone, in answer to the Report of the Commissioners on Lunacy, in regard to the treatment of Pauper Lunatics in Marylebone Workhouse.

Tuesday, June 9th.

LUNATICS (SCOTLAND).

The Lord Advocate obtained leave to bring in a Bill to alter and amend the Laws respecting Lunatics in Scotland.

NETLEY HOSPITAL.

Sir D. Norreys moved for certain returns respecting Netley Hospital, prefacing the motion by observations suggested by the debate of the preceding evening, when the estimate for that hospital was before the Committee of Supply.

Sir J. Ramsden said, there was no intention on the part of the Government to oppose the granting of the returns, and he hoped that, when laid upon the table, they would be the means of removing the misapprehension which prevailed upon the subject.

Mr. Stafford protested against more of the public money being expended upon an ill constructed building, which, according to medical authorities, would prove a hotbed of fever and erysipelas.

Mr. S. Herbert said, that he made no charge against the Government on account of the amount of the vote for this hospital; but he pointed out in what respect its original plan was, in his opinion, faulty, though, as far as the defect in its construction could be remedied, he admitted it had been remedied to a very great degree. The selection of the site, he thought, had been unfortunate.

Lord Palmerston repeated the explanation given by Sir J. Ramsden the preceding evening of the increase in the vote. As to the site, he never heard, he said, that it was at all unhealthy. With respect to the construction of the hospital considerable differences of opinion existed; but the matter had attracted the serious attention of the Government, and the greatest care would be taken to adapt the building to the purpose for which it was intended.

After some observations by Mr. Tite, and Sir F. Smith, the motion was agreed to.

PETITIONS.

The following petitions in favour of Mr. Headlam's Bill have been presented during the past week: from the medical officers and students of St. George's Hospital; from the medical practitioners of Reading and its vicinity; from Sunderland; from Croydon; from Pershore; from Manchester; from Liverpool, one from the medical officers of the Ladies' Charity, one from the Council of the Medical Institution, and one from the members of the Medical Institution; from medical officers of St. Thomas's Hospital; from Robert Pendick of Bristol; from Gravesend and Northfleet; from Plymouth; from Hull; from the President and Fellows of the Royal College of Physicians;

from Liverpool; from the physicians, surgeons, and students of St. Bartholomew's Hospital; from several medical practitioners of London; from Dover; from Wem, Salop; from Maidstone and its neighbourhood; from Dr. Munro of Dundee; from Wirksworth; from Greenwich and neighbourhood; from Weymouth and Melcombe Regis; from Belbroughton; from Guy's Hospital; from Croydon; from Mr. James Stedman of Guildford, and from sixteen medical practitioners; from Wellington; from Oldham; from T. O'Connor, surgeon, of March, Cambridgeshire; from Huddersfield; from J. Roberts of Golcar, R. Allatt of Paddock, and J. Tatterson of Lepton, surgeons; from Brighton; from Enniscorthy (for the council); and from Devonport.

Petitions in favour of Lord Elcho's Medical Bill have been presented from Hertford, Melrose, Falkirk, and Kelso; from the provost, magistrates, and council of the city of Aberdeen, and from the senate of Marischal College and University; from Hatfield, Welwyn, and Whitwell; from Enniscorthy (in favour of the registration clauses); from general medical practitioners of Ireland; from Dundee; from Edinburgh, Greenock, and Alloa.

Petitions for Poor-Law Medical Reform have been presented from the medical officers of Poor-Law Unions in England and Wales, agreed to at a general meeting in London, praying for a redress of their grievances, and that the recommendations of the Select Committee of the House of Commons may be carried into effect; from the medical officers of the Wellington Union; from Mr. Pound, Surgeon to the Hartley Wintney Union; from Mr. L. O. Fox, Surgeon to the Stockbridge Union; from the Salopian Medico-Ethical Society.

A petition in favour of a Bill for Restricting the Sale of Poisons has been presented from the Metropolitan Counties Branch of the British Medical Association.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

In these lists, an asterisk is prefixed to the names of Members of the Association.

BIRTHS.

*BARRETT. On May 23rd, at Wallingford, the wife of Charles A. Barrett, Esq., Surgeon, of a son.

*SHARMAN. On June 4th, at Birmingham, the wife of Malim Sharman, Esq., Surgeon, of a daughter.

MARRIAGES.

*HARRISON—EVANS. HARRISON, James Bower, M.D., of Higher Broughton, Manchester, to Catherine, only daughter of the late Shaw Evans, Esq., of Chester, at Chester, on May 27th.

*HOLMES—BROOKSBANK. HOLMES, Timothy, Esq., M.A., F.R.C.S., of Curzon Street, May Fair, to Sarah, only daughter of Thomas Brooksbank, Esq., of Bentinck Terrace, Regent's Park, at St. Marylebone Church, on June 9th.

*JEANS—WILKS. JEANS, J. W., Esq., Surgeon, of Grantham, to Miss Juliana J. Wilks, of the same place, at St. Martin-in-the-Fields, on June 9th.

PASS LISTS.

ROYAL COLLEGE OF SURGEONS. MEMBERS admitted at the meeting of the Court of Examiners, on Friday, June 5th, 1857:—

DIX, William Frederick, Smallburgh, Norfolk
HICKS, Charles Cyril, Toddington, Beds
MACKINTOSH, Matthew, Sleaford, Lincolnshire
MCSHANE, Eugene, Dungannon, co. Tyrone
MAGOR, Thomas, St. Columb, Cornwall
MAYNARD, Forster Fowler Martin, Kirk Bramwith, Doncaster
MEYER, Alexander John, Calcutta
SHERATON, George Robert, Sedgefield, Durham
SKINNER, David Shorter, Headcorn, Kent

LICENTIATES IN MIDWIFERY admitted at a meeting of the Board, on June 9th:—

BRAYTON, Jonathan, Whitehaven: diploma of membership dated April 17th, 1857
GRIFFITHS, Richard, Dolgelley, Merionethshire: May 15th, 1857
JAMES, Herbert, Merthyr Tydvil: May 29th, 1857
JONES, John Edwards, Dolgelley, Merionethshire: April 20th, 1857
JONES, William Goodall, Birmingham: April 24th, 1857
MACDOUGAL, Alexander Mason, Guy's Hospital: April 29th, 1857
O'REILLY, John, Ware, Herts: April 7th, 1837
POPE, Joseph John, Hampstead Road: April 6th, 1857
PRALL, Samuel, Rochester, Kent: April 20th, 1857
SIMPSON, Thomas Pemberton, Ebury Street, Pimlico: May 30th, 1856
TAYLOR, Adam, Norwich: May 2nd, 1856
THOMAS, John Little, Carmarthen; April 3rd, 1857
WARD, Isaac Dunlin, Clifton, near York: March 30th, 1857
WINSTANLEY, Robert, Wigan, Lancashire: May 1st, 1857
WINTERBOTHAM, Lauriston, Cheltenham: May 2nd, 1856

NEW FELLOWS. The following members of the College, having been previously balloted for, were admitted to the Fellowship at a meeting of the Council on June 10th:—

BAXTER, Francis Hastings, 6th Enniskillin Dragoons: diploma of membership dated ——, 1841
EVANS, Alfred, Walthamstow: June 22nd, 1838
GILLAM, Isaac John, Bath: April 20th, 1841
JONES, Arthur O'Brien, Epsom: January 27th, 1837
KENDALL, Thomas Masters, King's Lynn: March 18, 1842
LEAH, Thomas Cooper, Hyde: December 17th, 1841
NASH, James George, Isle of Man: April 3rd, 1827
SHILLITO, William, H.E.I.C.S., Bengal: Feb. 2nd, 1838
SPENCE, John, Otley, Yorkshire: April 5th, 1816
TEEVAN, James, Chesham Street: October 26th, 1838

HEALTH OF LONDON:—WEEK ENDING JUNE 6TH, 1857.

[From the Registrar-General's Report.]

THE returns for the week that ended on Saturday, June 6th, exhibit the gratifying fact that the remarkably small number of 868 deaths was registered in that period in London. There has been a constant decrease of mortality since the temperature rose; and in the first week of June, the deaths are about 200 less than they were in the first week of May. In the ten years 1847-56, the average number of deaths in the weeks corresponding with last week, was 979. But as the deaths of last week occurred in an increased population, the average, with a view to comparison, must be raised in proportion to the increase, and in this case it will become 1077. The result is that the deaths now returned are less by 209 than the average rate of mortality at this period of the year would have produced. In the first week of June 1847, the deaths were 786, in that of 1850 they were 844; and these furnish the only instances in corresponding weeks in which the deaths were not more numerous than those of last week, though each successive year has added to the number of persons living within the bills of mortality.

The deaths from the zymotic class of diseases, which in the previous week were 181, were last week 170. Of the six principal diseases in this class, diarrhœa alone shows a tendency to increase: the cases in which it was fatal having been in the last three weeks 12, 17, and 26. Summer cholera has made its appearance as usual, and four deaths are referred to it under the designation "English cholera", "cholera infantum", or "choleraic diarrhœa". A severe case of this complaint manifested itself in St. Ann Street, Limehouse, where a man, twenty-six years of age, died after a day's illness. Small-pox was fatal in only one case, which occurred in Deptford. Measles carried off 24 children; but the only parts in which it seems to be more fatal than usual, are the Goswell Street and City Road sub-districts, in each of which four deaths from it are returned. The deaths from hooping-cough were 47, of which five occurred in the Rectory sub-district, Marylebone.

The deaths caused by diseases of the respiratory organs were last week 125; the corrected average is 134. Those from bronchitis, which a few weeks ago were 100 or more, have declined to 53.

Only three persons whose deaths are returned had attained the age of 90 years or upwards. Two women were 93 years old; and a widow died in Hereford Street, Marylebone, at the great age of 96 years.

Last week the births of 774 boys and 768 girls, in all 1542 children, were registered in London. In the ten corresponding weeks of the years 1847-56, the average number was 1497.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·877 in. The highest read-

ing was 29·99 in., on the morning of Thursday. the mean temperature of the week was 60·6°, which is nearly 4° higher than that of the previous week, and 3·9° above the average of the same week in 43 years (as determined by Mr. Glaisher). The mean daily temperature was more or less above the average on every day of the week, except Monday, and the excess on Friday and Saturday was 10° and 11°. The mean dew-point temperature was 51°, and the difference between this and the mean air temperature was 9·6°. The highest reading of the thermometer in the sun was 106·7°, which occurred on Friday. The mean temperature of the water of the Thames was 62°; on Saturday, the temperature of the river rose to 64·7°. The wind was in the north-east on the first two days; afterwards, it was for the most part in the south-west. Rain fell to the amount of 0·23 in., most of which fell in the afternoon of Saturday.

MEDICAL REFORM: DEPUTATION TO LORD PALMERSTON.

A DEPUTATION of the representatives of the Medical Corporations of the United Kingdom had an interview with Lord Palmerston, on Tuesday last, at 2 P.M. The following bodies were represented: *Royal College of Physicians of London*, by Dr. Mayo, President, Dr. Alderson, Dr. Burrows, and Dr. Hawkins: *Royal College of Surgeons of England*, by Mr. Travers, President, Mr. Green and Mr. Stanley, Vice-Presidents, Mr. Lawrence and Mr. C. Hawkins: *Society of Apothecaries*, by Mr. De Grave, Master, Mr. Simoens, and Mr. Tegart: *University of Oxford*, by Dr. Acland: *Royal College of Surgeons in Edinburgh*, by Dr. Wood, President: *Faculty of Physicians and Surgeons in Glasgow*, by Dr. Watson: *King and Queen's College of Physicians in Ireland*, by Dr. Neligan, Censor: *Royal College of Surgeons in Ireland*, by Dr. Hans Irvine, President, and Dr. R. Williams, ex-President: *University of Dublin*, by Dr. Harrison: there were also present, on the part of the *British Medical Association*, Dr. Ogier Ward, Dr. Wynter, and Dr. Henry; and on the part of the *Extra-Academical Lecturers in Edinburgh*, Dr. W. T. Gairdner; Dr. Kidd and Dr. O'Connor also attended. The deputation was accompanied by the following Members of Parliament: Mr. Headlam; Sir W. Heathcote, Bart.; Sir W. Verner, Bart.; Mr. Neate; Mr. Hatchell; Mr. Vance; Mr. Gore Langton; Mr. Grogan; Mr. Waldron; Mr. D. O'Connell; Mr. Bennet; Mr. F. Crossley; Sir R. Levinge, Bart.; Mr. Somers; Mr. P. O'Brien; Mr. O. Ricardo; Mr. Cooper; Colonel Freestun; Mr. McCann; and Mr. McCarthy.

A letter was received from Dr. Maclagan, President of the Royal College of Physicians of Edinburgh.

Mr. HEADLAM introduced the deputation. He said that there was a conviction, not only in the minds of the members of the medical profession, but of the House of Commons, that the time had arrived when the subject of Medical Reform ought to be finally settled with regard to the public good. The members of the British Medical Association, as well as the different medical institutions throughout the United Kingdom, had agreed to the principles of a Bill, and in doing so had made mutual concessions. This Bill he had introduced to the House of Commons. They thought it a measure fully entitled to the support of the Government, being one suited for all purposes as far as regards good medical government and the protection and requirements of the public; therefore he felt warranted in not only asking for the support of the Government to secure the second reading, but also their aid in passing it through the House with all just speed, and not referring it to a select committee. The deputation which he had the honour of introducing did not object to any reasonable alteration of the details of the Bill, but they could not and would not consent to any departure from its substantial parts.

Dr. MAYO stated that formerly both Lord Palmerston and Sir Grey had intimated that the Government would support a Bill if sufficient unanimity existed among the profession. Such unanimity existed at present to as high a degree as could be expected; and it was hence with some surprise that they found another Bill brought forward in competition. The only reason that could be imagined for this opposition was the existence of some suspicion that the promoters of the Bill of Mr. Headlam did not favour the cause of Medical Reform. But the College of Physicians had, within the last twenty years, taken the greatest pains to improve their own constitution. The education scheme of Lord Elcho's Bill was moderate and very fit for ordinary purposes, but nothing more; it made no provision for the scientific advancement of the profession. Mr. Headlam's Bill, on the other hand, would give an opportunity of obtaining an education which should maintain the progress of medical science. Lord Elcho's Bill, by a single examination, pitched at a low standard, would raise the importance and dignity of the existing physicians who had passed through higher examinations. He reminded his lordship of the saying of Burke respecting the elevation gained by the nobility of Holland, when no further additions could be made to their numbers.

Mr. GREEN, on behalf of the College of Surgeons, said that they were not opposed to legislation in a proper direction. That College had existed as the Royal College of Surgeons since 1800; and in 1850 its name was changed into the Royal College of Surgeons of England, by royal charter. Its council was, to a certain extent, elective, and the principle of representation of the Fellows of the College was recognised. They were governed by by-laws requiring the sanction of the Legislature and the Secretary of State; and thereby establishing a security to the profession and the country through that supervision, and if any abuses crept in, it was owing to the neglect of the Secretary of State, and not of the council of the College. For a long time it has been the only recognised body in England for granting diplomas in surgery. Its membership was considered necessary for the public service, and in all Acts of Parliament requiring surgeons in England the College of Surgeons is mentioned. There were 500 diplomas granted last year. From the members' diplomas the income of the College is derived, which is expended altogether on the scientific objects of the institution. They were entitled to the confidence of the profession and the public, which they had, and they had strong claims on the support of the Government. It was true that there was, some years ago, some agitation regarding the College of Surgeons, but that had all subsided, and a better state of things existed. Lord Elcho might find, by reference to Mr. Warburton's committee, that the charges against the College of Surgeons were completely refuted. Some years ago there was a cry among the general practitioners, from a desire not to be connected with a trading company, to have a college of their own; but they did not seek to interfere with or destroy existing bodies. Lord Elcho had taken up wrong principles, for which he had not the slightest grounds; whilst the Bill of Mr. Headlam had in view to establish a proper council of inquiry as to the professional acquirements of all those entering the profession of medicine. There was an outcry against the College without any evidence of the misappropriation of its funds. It might be said that Lord Elcho's Bill allowed the granting of Fellowships of the College after the passing of the ordinary examination. But the College could not educate for the higher branches without the fees derived from admission of members. It had lost, last year alone, by the examination for the Fellowship, £365.

Dr. WILLIAMS, representing with his colleague, Dr. Irvine, the Royal College of Surgeons of Ireland, and the surgical profession in that country, felt bound, for the interest of the profession, and still more of the public, to represent the injurious effects Lord Elcho's Bill would have. Speaking in the presence of the Irish members of Parliament present, he could boldly say, that the Irish College of Surgeons had discharged its duties to the great benefit of the public, and was a credit to the country. Lord Elcho's Bill would confiscate its revenues and annul its privileges. If doing so were for the advantage of the public, he (Dr. Williams) would be ashamed to oppose such a proceeding; but as the Bill of Lord Elcho would seriously endanger public interest, a measure of legislation which ignored the principles of representation and self-government was without a shadow of excuse. Mr. Headlam's Bill was a measure for the promotion and advancement of education, both general and professional; while Lord Elcho's Bill fixed a minimum standard for the general practitioner only. It was necessary to effectually provide for the more extended education of the higher classes of practitioners, not indeed for the sake of the rich class, but to ensure the scientific progress of medicine and surgery. Mr. Headlam's Bill would effectually attain that great object, and on that account it was preferable in itself; and there was no pretext for enacting a measure confiscating the revenues and annulling rights secured by royal charter and Acts of Parliament.

Lord PALMERSTON could only say that he would give his attention to the provisions of the Bills before Parliament, and he would bear in mind the very important communications made to him. He could not say what course the Government would pursue; regarding the two Bills, they would be guided by the discussion of their merits. He had no desire to support any other course than the one which was satisfactory to the profession and for the public good.

Dr. BURROWS said Mr. Headlam's Bill was supported by all the medical examining boards of the United Kingdom, except the Apothecaries' Hall of Ireland; while Lord Elcho's had only the support of the Scotch Universities, which were not wholly medical.

Dr. HARRISON had been requested by the University of Dublin, to attend this meeting, and to express their approval generally of Mr. Headlam's Bill. The University of Dublin took no part in this medical question in reference to the medical corporations; their only desire was the improvement of medical education. They felt convinced that the improvement of medical science mainly depended on the foundation of a good general education, and therefore they were strongly of opinion that no medical degree should be conferred without a previous education and degree in arts in a university. The great obstacle to any improvement in medical education at present arose from the number of universities giving medical degrees without a previous education and a degree in arts in a university. If a young man could obtain a medical degree in one university without a degree in arts, he would not resort to another, in which that previous expensive step was required. Mr. Headlam's Bill insisted that no man could be registered as a physician unless he had first obtained a degree in arts and a degree in medicine; it also required a good general preliminary education for the other grades of the profession. As Lord Elcho's Bill ignored all distinctions in the profession, it held out no encouragement to pursue the higher grades, or to adopt a university education.

Dr. ACLAND was surprised that a man of Lord Elcho's sagacity and ability should bring forward a Bill of the kind that he is supporting, in opposition to that of Mr. Headlam. Some years ago he (Dr. Acland) felt it his duty to urge the University of Oxford to forego the right to examine for license practitioners in medicine. The general and scientific examination would be best conducted by the Universities; the practical by the corporations, whose examining boards consisted of practical men.

Mr. GROGAN, M.P., expressed a hope that although they could not expect a definite reply from Lord Palmerston, as to the course the Government intended to pursue, that they would aid in the speedy settlement of this important subject.

Dr. WOOD said that if Mr. Headlam's Bill did not support all the legitimate interests of Medical Reform, he would not support it. It established a uniform education throughout the United Kingdom; but more than that, it established a rigid system of tests of the qualifications of candidates under a superior council, so as to prevent any chance of candidates being improperly licensed. It established, too, unrestricted right of practice throughout the kingdom. All this it did by having the present machinery so modified as to meet the requirements of the times. In fact, it reformed without destroying. Lord Elcho's Bill, no doubt, carried out many of the objects of Medical Reform, but not so completely; and in doing so, it sacrificed all existing bodies. It should not be forgotten that those institutions were peculiarly British; they do not exist abroad; they were established in strict conformity with the principles of the British constitution, and with the view of giving to the medical profession the power of self-government. To disturb them, therefore, would be retrograde, and not progressive legislation. To hand over the profession to be regulated solely by a council appointed exclusively by the Crown, as the Bill of Lord Elcho proposes, would be to establish an un-English despotism.

The deputation then withdrew.

ROYAL COLLEGE OF SURGEONS: ELECTION OF COUNCILLORS. The annual meeting of Fellows of the Royal College of Surgeons of England will take place in the Hall of the College, on Thursday, July 2nd, to elect three Fellows into the Council of the College, in the room of two members going out in rotation, and of Robert Keate, Esq., a life member, resigned. The Fellows' dinner will take place the same evening at the Freemasons' Tavern, under the presidency of Samuel Smith, Esq., of Leeds.

TO CORRESPONDENTS.

Communications have been received from:—MR. T. HOLMES; DR. BRINTON; MR. J. V. SOLOMON; DR. J. W. OGLE; MR. HOLMES COOTE; MR. FREDERICK MASON; MR. R. TAYLOR; MR. AUGUSTIN PRICHARD; DR. P. H. WILLIAMS; MR. HUSBAND; MR. A. FERNIE; MR. G. KING; THE COUNCIL AND PROFESSORS OF THE LONDON HOSPITAL MEDICAL COLLEGE; MR. R. GRIFFIN; MR. FURNEAUX JORDAN; MR. I. HARRINSON; DR. D. NELSON; MR. J. R. HUMPHREYS; DR. WILLIAM BUDD; DR. BOWER HARRISON; MR. C. A. BARRETT; MR. E. BARBER; MR. W. I. COX; DR. F. SMITH; MR. W. A. EAGLAND; MR. J. R. BARNES; DR. LANKESTER; and MR. STOKE.

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1 oz. ditto	5s. 6d.	„
1½ oz. ditto	6s. 0d.	„
2 oz. ditto	7s. 0d.	„

No charge for package. In quantities of not less than Six Gross, assorted to suit the convenience of the purchaser, delivered free within 7 miles. Smaller quantities, 1s. per gross extra. Prompt attention to country orders on receipt of Post-office Order, payable to E. & H. HARRIS, at the Chief Office, London.

Great Saving in the Purchase of SIX GROSS of NEW MEDICAL GLASS BOTTLES, assorted to suit the convenience of Purchasers, at S. ISAACS & SON, 6, Warren Street, Tottenham Court Road, London.

6 and 8 oz., any shape, plain, or graduated	8s. 0d.	per gross
3 and 4 oz. ditto ditto.....	7s. 6d.	„
½ oz. Moulded Phials	4s. 6d.	„
1 oz. ditto.....	5s. 6d.	„
1½ oz. ditto	6s. 0d.	„
2 oz. ditto	7s. 0d.	„

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S. Bowles (late Windsor & Co.), Phial AND BOTTLE MERCHANT, Dealer in Druggists' Sundries, etc., 37, BARTHOLOMEW CLOSE, CITY. The cheapest house in London for every description of Medical Glass of the best quality. Samples and prices forwarded free on application.

TO SURGEONS, APOTHECARIES, AND DRUGGISTS.

Important Saving, by Prepayment, in the PURCHASE of NEW WHITE ROUND MOULDED VIALS OF THE BEST QUALITY.

PELLATT and Co. submit the following PRICES of VIALS, for PREPAYMENT only:—

1½ oz., oz., 10 dr., & 1½ oz.	per Gross,	6s.
14 dr., & 2 oz.	„	7s.
3 oz.	„	8s.
4 oz.	„	10s.
6 oz.	„	15s.
8 oz.	„	18s.
4½ oz. graduated in 3 doses	„	12s. 6d.

In quantities of not less than Six Gross, assorted to suit the convenience of the purchaser; delivered to carriers in London.

No charge for Package.

Breakage at risk of Purchaser.

The above Prices being based upon a calculation which excludes *all charges* whatever between the Manufacturer and the Consumer, no attention can be paid to any order not accompanied by a remittance in *full made payable in London*.—P. and Co. do not supply Green Glass.—Orders and remittances to be addressed,

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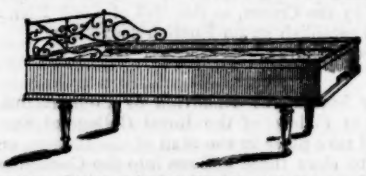

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To be had of the Inventor, GABRIEL JOZEAU, sole French Chemist, 49, Haymarket, London, whose name is printed on the Government Stamp; and all the principal Chemists of England.